



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Exhibit 11: SAR Test Report of Portable Cellular Phone FCC ID: PY7A3880033 Model: AINO

Date of test: June 16 – July 16, 2009
Date of Report: July 20, 2009

Laboratory: SAR Testing Laboratory Sony Ericsson Mobile Communications, Inc. 7001
 Development Drive, P.O. Box 13969, Research Triangle Park, NC, 27709, USA

Tested by: Rodney Dixon
 Eng. Technician IV, Global Type Approval

Test Responsible: Gerard Hayes 
 Technical Manager

Accreditation: This laboratory is accredited to ISO/IEC 17025-1999 to perform the following
 electromagnetic exposure tests:



- Specific Absorption Rate (SAR)
- Dielectric parameters
- RF power measurement

On the following types of products: Wireless communications devices.

**A2LA Certificate
 #1650-01**

Statement of Compliance: Sony Ericsson Mobile Communications, Inc declares under its sole responsibility that portable cellular telephone FCC ID PY7A3880033 model AINO to which this declaration relates, is in conformity with the appropriate General Population/Uncontrolled RF exposure standards, recommendations and guidelines (FCC 47 CFR §2.1093). It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices. Any deviations from these standards, guidelines and recommended practices are noted below:

(none)

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The results and statements contained herein relate only to the items tested. The names of individuals involved may be mentioned only in connection with the statements or results from this report.

Sony Ericsson Mobile Communications encourages all feedback, both positive and negative, on this test report.



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1. Introduction

The Sony Ericsson SAR Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular phone FCC ID PY7A3880033 model AINO. The Specific Absorption Rate (SAR) of this product was measured. The applicable RF safety guidelines and the SAR measurement specifications used for the test are described in [1].

2. Description of the Device Under Test

2.1 Antenna description

Type	Monopole	
Dimensions	Width	10.0 mm
	Length	43.0 mm

2.2 Device description

FCC ID Number / Device Model SEMC Type Number / IC Number	PY7A3880033 / AINO AAD-3880033-BV / 4170B-A3880033	
Hardware Revision # Software Revision # Battery Option(s)	API.1 R1AA062 BST-33	
Mode(s) of Operation Transmitting Frequency Range		Serial number of Device Tested
	GSM/GPRS/EDGE 824-849 MHz	CB511D25YJ
	GSM/GPRS/EDGE 1850-1910 MHz	CB511D25ZM
	UMTS/HSDPA Band V (824-849 MHz)	CB511D25YB
	UMTS/HSDPA Band II (1850-1910 MHz)	CB511D25ZK
	WLAN 2412 – 2472 MHz	CB511D2613
Production Unit or Identical Prototype (47 CFR §2.908)	Identical Prototype	
Device Category	Portable	
RF Exposure Limits	General Population / Uncontrolled	

GSM		850 MHz	1900 MHz
	Factory Target Maximum Output Power	f_{low}	33.0 dBm
f_{mid}		33.0 dBm	31.0 dBm
f_{high}		33.0 dBm	31.0 dBm
Calibration Frequency ($f_{low}, f_{mid}, f_{high}$) Duty Cycle	$f_{low}, f_{mid}, f_{high}$		$f_{low}, f_{mid}, f_{high}$
		1/8	1/8



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Device description (continued)

GPRS		850 MHz	1900 MHz		
	Factory Target Maximum Output Power	f_{low}	30.0 dBm	28.0 dBm	
Calibration Frequency ($f_{low}, f_{mid}, f_{high}$) Duty Cycle	f_{mid}	30.0 dBm	28.0 dBm		
	f_{high}	30.0 dBm	28.0 dBm		
	$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$		
		1/4	1/4		
EGPRS		850 MHz	1900 MHz		
	Factory Target Maximum Output Power	f_{low}	27.5 dBm	26.5 dBm	
Calibration Frequency ($f_{low}, f_{mid}, f_{high}$) Duty Cycle	f_{mid}	27.5 dBm	26.5 dBm		
	f_{high}	27.5 dBm	26.5 dBm		
	$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$		
		1/4	1/4		
W-CDMA (Circuit Switched, UMTS Mode)		850 MHz Band V	1900 MHz Band II	2100 MHz Band I	
	Factory Target Maximum Output Power	f_{low}	23.0 dBm	23.0 dBm	23.0 dBm
	RMC 12.2, $\beta_c=8, \beta_d=15$	f_{mid}	23.0 dBm	23.0 dBm	23.0 dBm
	Calibration Frequency ($f_{low}, f_{mid}, f_{high}$) Duty Cycle	f_{high}	23.0 dBm	23.0 dBm	23.0 dBm
		$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$	$f_{low}, f_{mid}, f_{high}$
	1/1	1/1	1/1		



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3. Test Equipment Used

3.1 Dosimetric System

The Sony Ericsson SAR Laboratory utilizes Dosimetric Assessment Systems (Dasy4™) for adjacent to head and body-worn measurements manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The overall RSS uncertainty of the measurement system is ±9.8 % (K=1) with an expanded uncertainty of ±19.5 % (K=2) for Dasy4™. The measurement uncertainty budget is given in Appendix 5 for the system. The list of calibrated equipment used for the measurements is shown in the following table.

Description	Serial Number	Cal Due Date
DASY3 DAE V1	345	Oct-31-2009
DASY3 DAE V1	417	Nov-07-2009
DASY3 DAE V1	415	Oct-31-2009
E-Field Probe ETDV6	1539	Nov-17-2009
E-Field Probe ETDV6	1584	Nov-17-2009
E-Field Probe ETDV6	1587	May-25-2010
Dipole Validation Kit, DV835V2	438	May-25-2010
Dipole Validation Kit, DV1900V2	536	May-26-2010
Dipole Validation Kit, DV2440V2	702	May-20-2010
S.A.M. Phantom used for 835MHz (Head)	1023	
S.A.M. Phantom used for 835MHz (Body)	1031	
S.A.M. Phantom used for 1900MHz (Head)	1054/1335	
S.A.M. Phantom used for 1900MHz (Body)	1020	
S.A.M. Phantom used for 2450MHz (Head and Body)	1251	

3.2 Additional Equipment

Description	Serial Number	Cal Due Date
Signal Generator HP8648C	3443U00433	February 01, 2010
Power Meter 437B	3125U16382	December 04, 2009
Power Meter 437B	3125U16190	May 07, 2010
Power Sensor - 8482H	MY41090241	June 4, 2010
Power Sensor - 8482H	3318A07097	June 04, 2010
Dielectric Probe Kit HP85070B	US33020256	Sept. 11, 2009
Dickson Thermometer TC200	909709	May 4, 2010
Dickson Humidity FH325	9099180	May 07, 2010
HP RF Amplifier 8347A	3307A1069	June 08, 2010



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4. Electrical parameters of the tissue simulating liquid

Prior to conducting SAR measurements, the relative permittivity, ϵ_r , and the conductivity, σ , of the tissue simulating liquids were measured with the dielectric probe kit. These values, along with the temperature of the simulated tissue are shown in the table below. A mass density of $\rho=1g/cm^3$ was entered into the system in all the cases. It can be seen that the measured parameters are within tolerance of the recommended limits [1]. The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases. It is seen that the measured parameters are satisfactory for compliance testing.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			ϵ_r	σ (S/m)	Simulated Tissue Temp (°C)
835	Head	July 8, 2009	41.87	0.893	24
		July 6, 2009	42.31	0.9004	23.6
		Recommended Limits	41.5	0.9	20-25
	Body	June 17, 2009	56.13	0.9587	23.3
		July 13, 2009	56.17	0.9647	23
		Recommended Limits	55.2	0.97	20-25
1900	Head	July 13, 2009	38.44	1.467	23
		July 7, 2009	38.41	1.448	23.9
		June 21, 2009	39.25	1.464	23.7
		Recommended Limits	40	1.4	20-25
	Body	June 16, 2009	51.42	1.515	23.3
		July 14, 2009	50.89	1.534	23
2450	Head	July 15, 2009	39.23	1.908	23.2
		July 16, 2009	38.99	1.884	23.6
		Recommended Limits	39.2	1.95	20-25
	Body	July 14, 2009	51.2	2.01	23
		Recommended Limits	52.7	1.95	20-25

The list of ingredients and the percent composition used for the simulated tissue are indicated in the table below.

Ingredient	800/900 MHz Head 900MHz Body	800MHz Body	1800/1900 MHz Head 1800MHz Body	1900MHz Body
Sugar	57.99%	56.00%	--	--
DGBE	--	--	44.92%	30.82%
Water	39.72%	41.76%	54.90%	68.89%
Salt	1.18%	0.76%	0.18%	0.29%
HEC	0.92%	1.21%	--	--
Bact.	0.19%	0.27%	--	--



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5. System Accuracy Verification

A system accuracy verification of the DASY4 was performed using the measurement equipment listed in Section 3.1. The daily system accuracy verification occurs within the flat section of the SAM phantom.

A SAR measurement was performed to see if the measured SAR was within +/- 10% from the numerical target SAR values indicated in the standards. These tests were done at 835MHz/900MHz and/or 1800MHz/1900MHz. These frequencies are within 100MHz of the mid-band frequency of the test device, according to [1].

The test was conducted on the same days as the measurement of the DUT. The results from the system accuracy verification are displayed in the table below (SAR values are normalized to 1W forward power delivered to the dipole). The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases.

It is seen in the following table that the system is operating within its specification, as the results are within acceptable tolerance of the reference values. The SAR distributions for each dipole measurement are shown in Appendix 1.

f (MHz)	Tissue Type	Date Measured	SAR (W/kg)		Dielectric Parameters		Tissue Temp (°C)
			1g	10g	ϵ_r	σ (S/m)	
835	Head	Jul-08-09	9.47	6.21	41.87	0.89	24
		Jul-06-09	9.85	6.56	42.31	0.90	23.6
		Jun-22-09	9.64	6.30	41.49	0.90	23.7
		Jun-23-09	9.81	6.42	41.25	0.89	23.6
		Recommended Limits	9.50	6.20	41.50	0.90	20-25
	Body	Jun-17-09	9.93	6.58	56.13	0.96	23.3
		Jul-13-09	9.42	6.20	56.17	0.96	23
		Recommended Limits	9.90	6.46	55.20	0.97	20-25
1900	Head	Jul-13-09	38.71	20.43	38.44	1.47	23
		Jul-07-09	39.62	20.61	38.41	1.45	23.9
		Jun-21-09	38.60	20.25	39.25	1.46	23.7
		Jul-06-09	40.25	20.90	38.91	1.47	23.7
		Jun-24-09	38.36	19.98	39.06	1.46	23.6
		Jul-08-09	39.64	20.62	38.47	1.47	24
		Recommended Limits	39.7	20.5	40	1.4	20-25
	Body	Jun-16-09	41.14	21.47	51.42	1.52	23.3
Jul-14-09		39.23	20.44	50.89	1.53	23	
Recommended Limits		40.5	20.89	53.3	1.52	20-25	
2450	Head	Jul-15-09	53.68	23.86	39.23	1.91	23.2
		Jul-16-09	50.85	22.70	38.99	1.88	23.6
		Recommended Limits	52.4	24	39.8	1.95	20-25
	Body	Jul-14-09	59.92	26.55	51.2	2.01	23
	Recommended Limits	54.5	25.2	52.7	1.95	20-25	

Daily, prior to conducting tests, measurements were made with the RF sources powered off to determine the system noise level. The highest system noise was 0.0036 W/kg, which is below the recommended limit in [1].



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6.0 Test Results

For all measurements, the test sample was operated using a base station simulator (CMU-200) that allows control of the transmitter using the signally software that is installed on the phone. For the purposes of these tests, the unit is commanded to set to the proper channel, transmitter power level and transmit mode of operation. The phone was tested in the configurations stipulated in [1,2]. The phone was positioned into these configurations using the positioner supplied with the DASY4 SAR measurement system.

HSDPA Considerations

As per TCB/FCC guidance, the conducted power of the device was confirmed in two UMTS circuit switched modes (RMC and Voice), four HSDPA modes, and five HSUPA modes. A CMU-200 was used to establish the call processing and modulation settings and an RF power meter was used for the measurements. For all HSDPA measurements, the following settings were applied:

$$H\text{-SET3 QPSK, CQI feedback} = 2\text{msec, } \Delta\text{ACK} = \Delta\text{NACK} = \Delta\text{CQI} = 8$$

The results (including relevant CMU modulation settings) are presented in the Table 6.0. As seen in the table, the conducted power measurements for the HSDPA and HSUPA modes were equal or below the circuit switched modes for each frequency/channel.

Table 6.0: Conducted Power Summary for UMTS – HSDPA and HSUPA Modes

a) **HSDPA Settings and Conducted Power**

Band II					1852.4	1880	1907.6
	Settings			Frequency (MHz):	max (dBm)		
	βc	βd	ΔHS				
CS-RMC	8	15	-	measured (dBm)	23.5	23.5	23.5
CS-Voice	8	15	-	measured (dBm)	23.5	23.5	23.5
HSDPA - 1	2	15	8	measured (dBm)	23.5	23.5	22.5
HSDPA - 2	12	15	8	measured (dBm)	22.8	22.8	22.6
HSDPA - 3	15	8	8	measured (dBm)	22.7	22.7	22.5
HSDPA - 4	15	4	8	measured (dBm)	22.7	22.7	22.4
Band V					826.4	835	846.6
	Settings			Frequency (MHz):	max (dBm)		
	βc	βd	ΔHS				
CS-RMC	8	15	-	measured (dBm)	24	23.5	24
CS-Voice	8	15	-	measured (dBm)	24	23.9	24
HSDPA - 1	2	15	8	measured (dBm)	23.8	23.9	24
HSDPA - 2	12	15	8	measured (dBm)	23.2	23	23.2
HSDPA - 3	15	8	8	measured (dBm)	23.1	22.8	22.9
HSDPA - 4	15	4	8	measured (dBm)	23	22.7	22.8



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b) HSUPA Settings

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs}	β_{ec}	β_{ed}
1	11/15 (3)	15/15 (3)	64	11/15	22/15	209/225	1039/225
2	6/15	15/15	64	6/15	12/15	12/15	94/75
3	15/15	9/15	64	15/9	30/15	30/15	1:47/15 2:47/15
4	2/15	15/15	64	2/15	4/15	2/15	56/75
5	15/15 (4)	15/15 (4)	64	15/15 (4)	30/15	24/15	134/15

Sub-test	β_{ec} (SF)	β_{ed} (code)	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	4	1	1.0	0.0	20	75
2	4	1	3.0	2.0	12	67
3	4	2	2.0	1.0	15	92
4	4	1	3.0	2.0	17	71
5	4	1	1.0	0.0	21	81

c) HSUPA Conducted Power (dBm)

	Band II			Band V		
	1852.4 (Band2)	1880 (Band2)	1907.6 (Band2)	826.4 (Band5)	836.4 (Band5)	846.6 (Band5)
HSUPA - Sub-test 1	23.4	23.3	23.2	23.8	23.7	23.8
HSUPA - Sub-test 2	20.5	20.9	21.0	21.3	21.0	20.8
HSUPA - Sub-test 3	22.0	21.9	21.9	22.3	22.1	22.2
HSUPA - Sub-test 4	21.0	21.0	21.0	21.3	21.1	21.2
HSUPA - Sub-test 5	23.5	23.5	23.4	23.8	23.7	23.8

For head measurements, the units were measured in the following voice modes which correspond to the operating conditions with the highest conducted power:

- GSM with a 1/8 duty cycle
- UMTS (circuit switched) with RMC=12.2, $\beta_c=8$, and $\beta_d=15$

In all configurations, tests were conducted with Bluetooth functionality turned off.

For body measurements, the units were measured in the following data modes which correspond to the operating conditions with the highest conducted power:

- E/GPRS (Multislot, Class 10) with a 1/4 duty cycle
- UMTS (circuit switched) with RMC=12.2, $\beta_c=8$, and $\beta_d=15$



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Simultaneous Transmitter (i.e. WLAN, Bluetooth) Considerations

This Bluetooth/WLAN antenna is located at a minimum of 80.0 mm from the cellular antenna. The maximum reported WLAN conducted power is 17.5 dBm.

The following table summarizes the stand-alone maximum SAR values for the cellular and WLAN operating conditions:

Operating Configuration	Maximum Cellular SAR (W/kg, 1-gram average)	Maximum WLAN SAR (W/kg, 1-gram average)	Sum(Cellular + WLAN) (W/kg, 1-gram average)
Head Adjacent	0.88	0.10	0.98
Body-worn	1.20	0.12	1.32

Since the sum of two stand-alone SAR values are below 1.6 W/kg in all test configurations, additional simultaneous transmission considerations (including the processing of volumetric scans) are not required.

For reference, the measured stand-alone SAR values are presented in the following tables:

- Head Adjacent, Cellular: Tables 1-8
- Head Adjacent, WLAN: Tables 9
- Body-worn, Cellular: Tables 10-11
- Body-worn, WLAN: Tables 12



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6.1 Head Adjacent Test Results

The SAR results shown in Tables 1 through 4 are maximum SAR values averaged over 1 gram and 10 grams of phantom tissue. Also shown are the measured conducted output powers, the temperature of the test facility during the test, the temperature of the simulated tissue, the measured drift, and the extrapolated SAR. The extrapolated SAR corresponds to the measured SAR scaled to the maximum conducted output power.

The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases.

The test conditions indicated as bold numbers in the following tables are included in Appendix 2. All other test conditions measured lower SAR values than those included.



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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (Cheek / Touch Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.59	0.43	-0.01	0.62	0.45	23.7	23.6
	189 / 837	33.3	0.60	0.44	0.11	0.63	0.46		
	251 / 849	33.3	0.62	0.45	0.03	0.65	0.47		
1900 GSM	512 / 1850	30.5	0.30	0.16	0.05	0.30	0.16	23.6	23.6
	660/1880	30.5	0.36	0.20	-0.04	0.36	0.20		
	810/1910	30.4	0.47	0.25	-0.02	0.47	0.25		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (15° Tilt Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.39	0.29	0.02	0.41	0.30	23.7	23.6
	189 / 837	33.3	0.40	0.30	0.04	0.42	0.31		
	251 / 849	33.3	0.34	0.25	0.03	0.36	0.26		
1900 GSM	512 / 1850	30.5	0.14	0.08	-0.04	0.14	0.08	23.6	23.6
	660/1880	30.5	0.18	0.11	-0.02	0.18	0.11		
	810/1910	30.4	0.22	0.14	-0.01	0.22	0.14		

Table 1: SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured closed against the left head in GSM mode.



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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (Cheek / Touch Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.77	0.57	-0.09	0.81	0.60	24	23.7
	189 / 837	33.3	0.77	0.57	-0.15	0.81	0.60		
	251 / 849	33.3	0.78	0.58	-0.10	0.82	0.61		
1900 GSM	512 / 1850	30.5	0.13	0.08	0.08	0.13	0.08	23.9	23.7
	660/1880	30.5	0.13	0.08	-0.14	0.13	0.08		
	810/1910	30.4	0.13	0.08	-0.05	0.13	0.08		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (15° Tilt Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.37	0.27	-0.09	0.39	0.28	24	23.7
	189 / 837	33.3	0.42	0.31	-0.04	0.44	0.32		
	251 / 849	33.3	0.37	0.27	-0.10	0.38	0.28		
1900 GSM	512 / 1850	30.5	0.15	0.09	-0.01	0.15	0.09	23.9	23.7
	660/1880	30.5	0.16	0.10	0.00	0.16	0.10		
	810/1910	30.4	0.18	0.11	0.00	0.18	0.11		

Table 2: SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured open against the left head in GSM mode.



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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Right Head (Cheek / Touch Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.59	0.45	0.08	0.62	0.47	23.7	23.6
	189 / 837	33.3	0.57	0.43	0.01	0.59	0.45		
	251 / 849	33.3	0.55	0.41	-0.04	0.57	0.43		
1900 GSM	512 / 1850	30.5	0.25	0.16	0.02	0.25	0.16	23.6	23.6
	660/1880	30.5	0.30	0.19	-0.08	0.30	0.19		
	810/1910	30.4	0.36	0.22	-0.06	0.36	0.22		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Right Head (15° Tilt Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.47	0.35	0.17	0.49	0.37	23.7	23.6
	189 / 837	33.3	0.46	0.34	0.00	0.48	0.35		
	251 / 849	33.3	0.35	0.26	-0.05	0.36	0.27		
1900 GSM	512 / 1850	30.5	0.13	0.08	0.01	0.13	0.08	23.6	23.6
	660/1880	30.5	0.18	0.10	0.00	0.18	0.10		
	810/1910	30.4	0.23	0.13	0.01	0.23	0.13		

Table 3: SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured closed against the right head in GSM mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Right Head (Cheek / Touch Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.68	0.51	-0.14	0.72	0.53	24	23.7
	189 / 837	33.3	0.76	0.55	-0.08	0.80	0.58		
	251 / 849	33.3	0.84	0.61	-0.10	0.88	0.63		
1900 GSM	512 / 1850	30.5	0.24	0.15	-0.05	0.24	0.15	23.9	23.7
	660/1880	30.5	0.23	0.15	-0.07	0.23	0.15		
	810/1910	30.4	0.25	0.15	-0.07	0.25	0.15		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Right Head (15° Tilt Position)						
			GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
800 GSM	128 / 824	33.3	0.39	0.29	-0.10	0.41	0.30	24	23.7
	189 / 837	33.3	0.44	0.32	-0.11	0.46	0.34		
	251 / 849	33.3	0.39	0.29	-0.11	0.41	0.30		
1900 GSM	512 / 1850	30.5	0.12	0.07	0.03	0.12	0.07	23.9	23.7
	660/1880	30.5	0.13	0.08	-0.02	0.13	0.08		
	810/1910	30.4	0.15	0.09	-0.04	0.15	0.09		

Table 4: SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured open against the right head in GSM mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Left Head Position (Cheek / Touch Position)					Ambient Temp (°C)	Simulate Temp (°C)
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		
Band V	4133/826.6	24	0.322	0.227	0.09	0.32	0.23	24.3	24
	4175/835	23.9	0.278	0.194	0.17	0.28	0.19		
	4232/846.4	24	0.311	0.219	0.20	0.31	0.22		
Band II	9263/1852.6	23.5	0.493	0.277	-0.03	0.49	0.28	23.3	23.4
	9400/1880	23.5	0.427	0.249	0.07	0.43	0.25		
	9537/1907.4	23.5	0.452	0.259	-0.17	0.45	0.26		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Left Head Position (15° Tilt Position)					Ambient Temp (°C)	Simulate Temp (°C)
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		
Band V	4133/826.6	24	0.195	0.143	-0.01	0.20	0.14	24.3	24
	4175/835	23.9	0.176	0.129	0.03	0.18	0.13		
	4232/846.4	24	0.171	0.125	0.03	0.17	0.13		
Band II	9263/1852.6	23.5	0.27	0.17	-0.06	0.27	0.17	23.3	23.4
	9400/1880	23.5	0.27	0.168	0.03	0.27	0.17		
	9537/1907.4	23.5	0.241	0.146	-0.07	0.24	0.15		

Table 5: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured closed against the left head in UMTS mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Left Head Position (Cheek / Touch Position)						
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
Band V	4133/826.6	24	0.482	0.355	-0.03	0.48	0.36	23.6	23.6
	4175/835	23.9	0.426	0.313	0.00	0.43	0.31		
	4232/846.4	24	0.457	0.334	0.03	0.46	0.33		
Band II	9263/1852.6	23.5	0.28	0.185	-0.10	0.28	0.19	24.3	24
	9400/1880	23.5	0.246	0.156	-0.05	0.25	0.16		
	9537/1907.4	23.5	0.2	0.126	-0.08	0.20	0.13		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Left Head Position (15° Tilt Position)						
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
Band V	4133/826.6	24	0.293	0.216	0.02	0.29	0.22	23.6	23.6
	4175/835	23.9	0.206	0.144	0.00	0.21	0.14		
	4232/846.4	24	0.181	0.126	0.01	0.18	0.13		
Band II	9263/1852.6	23.5	0.319	0.191	-0.02	0.32	0.19	24.3	24
	9400/1880	23.5	0.293	0.176	-0.05	0.29	0.18		
	9537/1907.4	23.5	0.245	0.147	-0.05	0.25	0.15		

Table 6: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured closed against the left head in UMTS mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Right Head Position (Cheek / Touch Position)						
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
Band V	4133/826.6	24	0.30	0.22	-0.08	0.30	0.22	24.3	24.0
	4175/835	23.9	0.27	0.20	0.05	0.27	0.20		
	4232/846.4	24	0.27	0.20	0.08	0.27	0.20		
Band II	9263/1852.6	23.5	0.50	0.31	-0.06	0.50	0.31	23.3	23.4
	9400/1880	23.5	0.52	0.32	0.06	0.52	0.32		
	9537/1907.4	23.5	0.51	0.32	-0.12	0.51	0.32		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Right Head Position (15° Tilt Position)						
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
Band V	4133/826.6	24	0.21	0.15	-0.05	0.21	0.15	24.3	24.0
	4175/835	23.9	0.19	0.13	0.02	0.19	0.13		
	4232/846.4	24	0.14	0.10	0.02	0.14	0.10		
Band II	9263/1852.6	23.5	0.30	0.17	-0.07	0.30	0.17	23.3	23.4
	9400/1880	23.5	0.28	0.16	0.09	0.28	0.16		
	9537/1907.4	23.5	0.24	0.14	-0.14	0.24	0.14		

Table 7: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured closed against the right head in UMTS mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Right Head Position (Cheek / Touch Position)						
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
Band V	4133/826.6	24	0.52	0.36	-0.01	0.52	0.36	23.6	23.6
	4175/835	23.9	0.43	0.31	0.02	0.43	0.31		
	4232/846.4	24	0.49	0.36	-0.03	0.49	0.36		
Band II	9263/1852.6	23.5	0.53	0.33	-0.06	0.53	0.33	24.3	24.0
	9400/1880	23.5	0.46	0.29	0.01	0.46	0.29		
	9537/1907.4	23.5	0.32	0.19	-0.13	0.32	0.19		
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Right Head Position (15° Tilt Position)						
			UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)
Band V	4133/826.6	24	0.28	0.21	0.00	0.28	0.21	23.6	23.6
	4175/835	23.9	0.24	0.18	-0.03	0.24	0.18		
	4232/846.4	24	0.18	0.12	0.00	0.18	0.12		
Band II	9263/1852.6	23.5	0.25	0.16	0.00	0.25	0.16	24.3	24.0
	9400/1880	23.5	0.23	0.14	-0.02	0.23	0.14		
	9537/1907.4	23.5	0.20	0.12	0.12	0.20	0.12		

Table 8: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured open against the right head in UMTS mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Channel/frequency	Conducted Output Power (dBm)	WLAN Left Head Position (15° Tilt Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.1	0.01	0.01	-0.04	23.7	23.6
	6/2437	17.3	0.02	0.01	0.15		
	11/2462	17.4	0.02	0.01	0.03		
	13/2472	17.2	0.03	0.01	-0.07		
Closed	1/2412	17.1	0.04	0.02	0.02	23.4	23.2
	6/2437	17.3	0.05	0.03	-0.11		
	11/2462	17.4	0.10	0.05	0.05		
	13/2472	17.2	0.09	0.05	-0.01		
f(MHz)	Channel/frequency	Conducted Output Power (dBm)	WLAN Right Head Position (Cheek / Touch Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.1	0.02	0.01	0.03	24	24
	6/2437	17.3	0.02	0.01	-0.17		
	11/2462	17.4	0.03	0.02	0.03		
	13/2472	17.2	0.03	0.02	0.00		
Closed	1/2412	17.1	0.02	0.01	-0.06	23	23
	6/2437	17.3	0.03	0.02	0.02		
	11/2462	17.4	0.05	0.03	0.00		
	13/2472	17.2	0.05	0.03	0.02		
f(MHz)	Channel/frequency	Conducted Output Power (dBm)	WLAN Right Head Position (15° Tilt Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.1	0.01	0.01	0.04	24	24
	6/2437	17.3	0.02	0.01	0.01		
	11/2462	17.4	0.03	0.01	0.10		
	13/2472	17.2	0.03	0.01	0.04		
Closed	1/2412	17.1	0.04	0.02	0.02	23	23
	6/2437	17.3	0.05	0.03	-0.11		
	11/2462	17.4	0.10	0.05	0.05		
	13/2472	17.2	0.09	0.05	-0.01		

Table 9: WLAN SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured open and closed against the head in WLAN mode.



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6.2 Body-Worn Test Results

The SAR results shown in Tables 5 and 6 are the maximum SAR values averaged over 1gram and 10 grams of phantom tissue. Also shown are the measured conducted output powers, the temperature of the test facility during the test, the temperature of the simulated tissue after the test, the measured drift and the extrapolated SAR. The extrapolated SAR corresponds to the measured SAR scaled to the maximum conducted output power.

A “flat” phantom was used for the body-worn tests. This “flat” phantom corresponds to the flat portion of the SAM phantom.

The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases.

The same device holder described in section 6 was used for positioning the phone. The cellular phone was tested with a headset (HBP-20) connected to the device for all body-worn SAR measurements.

The following body-worn accessories were tested for this phone:
 -15 mm spacer

A full data set output of the test conditions with the highest SAR values is included as Appendix 3. These test conditions included are indicated as bold numbers in the following tables. All other test conditions measured lower SAR values than those included.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Operating Condition	Channel/frequency	Conducted Output Power (dBm)	Body Worn						
				15mm SPACER						
				Measured (W/kg) 1g / 10g	Drift (dB)	Extrapolated (W/kg) 1g / 10g	Ambient Temp (°C)	Simulate Temp (°C)		
Back of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	31	1.07	0.76	0.01	1.20	0.85	23.6	23.3
		189 / 837	31	1.00	0.71	-0.04	1.12	0.79		
		251 / 849	31	0.83	0.59	-0.06	0.93	0.66		
	1:8 Duty Cycle	189 / 837	31	0.665	0.467	0.02	0.70	0.49	23.6	23.3
1900 GSM	2:8 Duty Cycle	512 / 1850	30.3	0.33	0.20	-0.04	0.34	0.21	23.7	23.3
		660/1880	30.4	0.48	0.29	-0.05	0.49	0.29		
		810/1910	30.3	0.60	0.36	0.03	0.61	0.36		
	1:8 Duty Cycle	810/1910	30.3	0.286	0.172	0.0	0.29	0.17	23.7	23.3
Front of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	31	0.52	0.39	0.06	0.59	0.44	23.6	23.3
		189 / 837	31	0.48	0.36	0.07	0.54	0.40		
		251 / 849	31	0.40	0.30	-0.06	0.45	0.33		
1900 GSM	2:8 Duty Cycle	512 / 1850	30.3	0.15	0.10	-0.02	0.16	0.10	23.3	23.4
		660/1880	30.4	0.16	0.10	0.12	0.16	0.10		
		810/1910	30.3	0.20	0.12	0.02	0.20	0.12		

Table 10: SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured with GSM/GPRS Mode.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	15mm SPACER					Ambient Temp (°C)	Simulate Temp (°C)
			Measured (W/kg) 1g / 10g	Drift (dB)	Extrapolated (W/kg) 1g / 10g				
Back of phone facing body									
Band V	4133/826.6	24	0.62	0.42	0.09	0.62	0.42	23.4	23.0
	4175/835	23.9	0.51	0.35	0.03	0.51	0.35		
	4232/846.4	24	0.54	0.38	0.01	0.54	0.38		
Band II	9263/1852.6	23.5	0.40	0.24	0.04	0.40	0.24	23.2	23.0
	9400/1880	23.5	0.42	0.25	-0.01	0.42	0.25		
	9537/1907.4	23.5	0.50	0.29	-0.05	0.50	0.29		
Front of phone facing body									
Band V	4133/826.6	24	0.21	0.16	0.16	0.21	0.16	23.4	23.0
	4175/835	23.9	0.21	0.15	0.05	0.21	0.15		
	4232/846.4	24	0.21	0.15	0.12	0.21	0.15		
Band II	9263/1852.6	23.5	0.18	0.11	0.07	0.18	0.11	23.2	23.0
	9400/1880	23.5	0.18	0.11	0.06	0.18	0.11		
	9537/1907.4	23.5	0.17	0.10	-0.06	0.17	0.10		

Table 11: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured against the body with UMTS/HSDPA Modes.



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	WLAN Body Worn 15mm SPACER				
			Measured (W/kg) 1g / 10g	Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)	
Back of phone facing body							
WLAN	1/2412	17.1	0.05	0.03	23.2	23.0	
	6/2437	17.3	0.10	0.05			
	11/2462	17.4	0.12	0.06			
	13/2472	17.2	0.14	0.07			
Front of phone facing body							
WLAN	1/2412	17.1	0.01	0.01	23.2	23.0	
	6/2437	17.3	0.02	0.01			
	11/2462	17.4	0.02	0.01			
	13/2472	17.2	0.02	0.01			

Table 12: WLAN SAR measurement results for the portable cellular telephone FCC ID PY7A3880033 model AINO at maximum output power with Standard Battery BST-33. Measured against the body with WLAN Modes.



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Approved SEM/CV/PF/P Gerard Hayes	Checked		A

References

- [1] FCC, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions," Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01).
- [2] IEC 62209-1, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz) ", First Edition 2005-02.
- [3] IEEE, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," Std 1528-2003, June 2003.



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Appendix 1

SAR distribution comparison for the system accuracy verification



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check .

Validation_835Head_438_1023_23June09_T01

File Name: [Validation_835Head_438_1023_23June09_T01.da4](#)

Phantom: SAM with CRP (Low Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)Duty Cycle: 1:1Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.892 \text{ mho/m}$; $\epsilon_r = 41.2$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.06 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.7 V/m; Power Drift = 0.038 dB

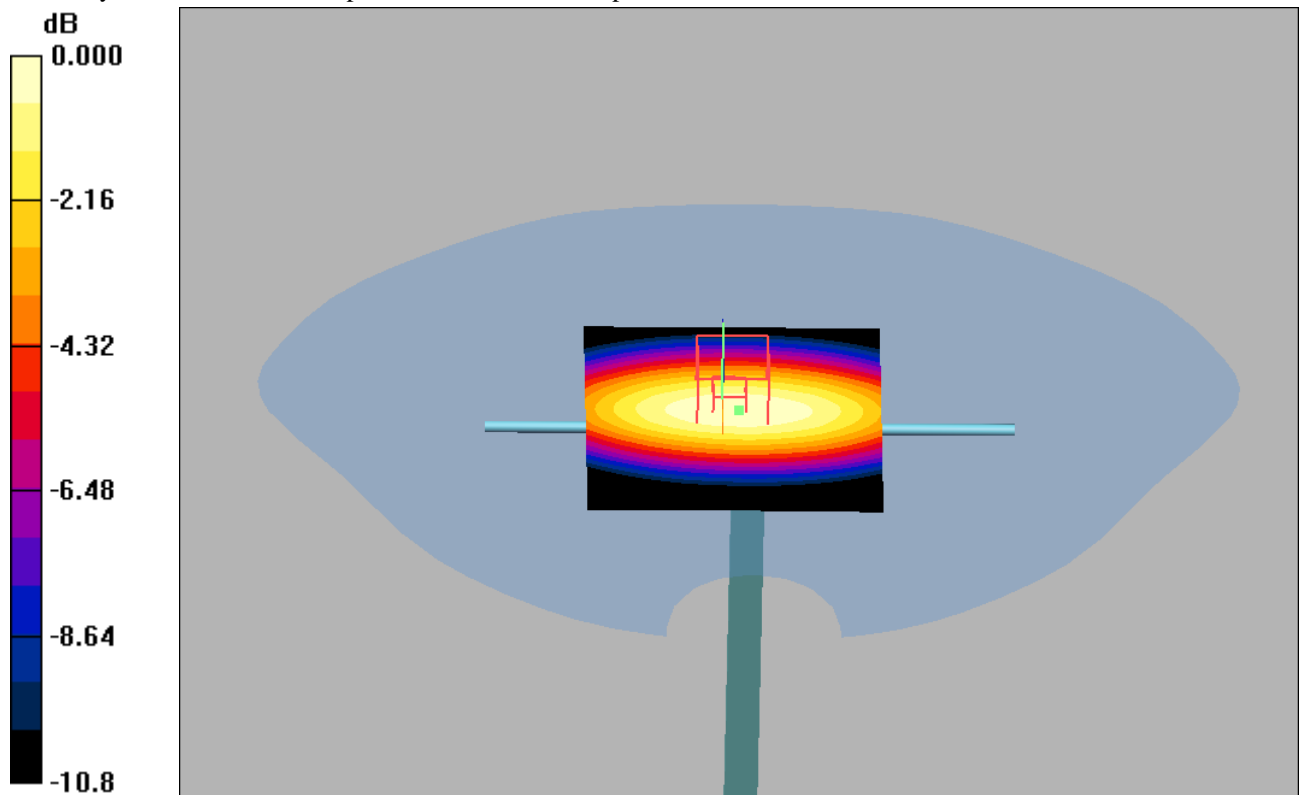
Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.981 mW/g; SAR(10 g) = 0.641 mW/g

Maximum value of SAR (measured) = 1.06 mW/g

Procedure Notes: Pin: before 99.6 mW / after 100 mW

Humidity - 42 % Ambient Temp - 23.7 C Simulant Temp - 23.6 C



0 dB = 1.06mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_835Head_438_1023_22June09_T01

File Name: [Validation_835Head_438_1023_22June09_T01.da4](#)

Phantom: SAM with CRP (Low Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)Duty Cycle: 1:1Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.897 \text{ mho/m}$; $\epsilon_r = 41.5$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DAS4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.04 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.1 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.957 mW/g; SAR(10 g) = 0.625 mW/g

Maximum value of SAR (measured) = 1.04 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

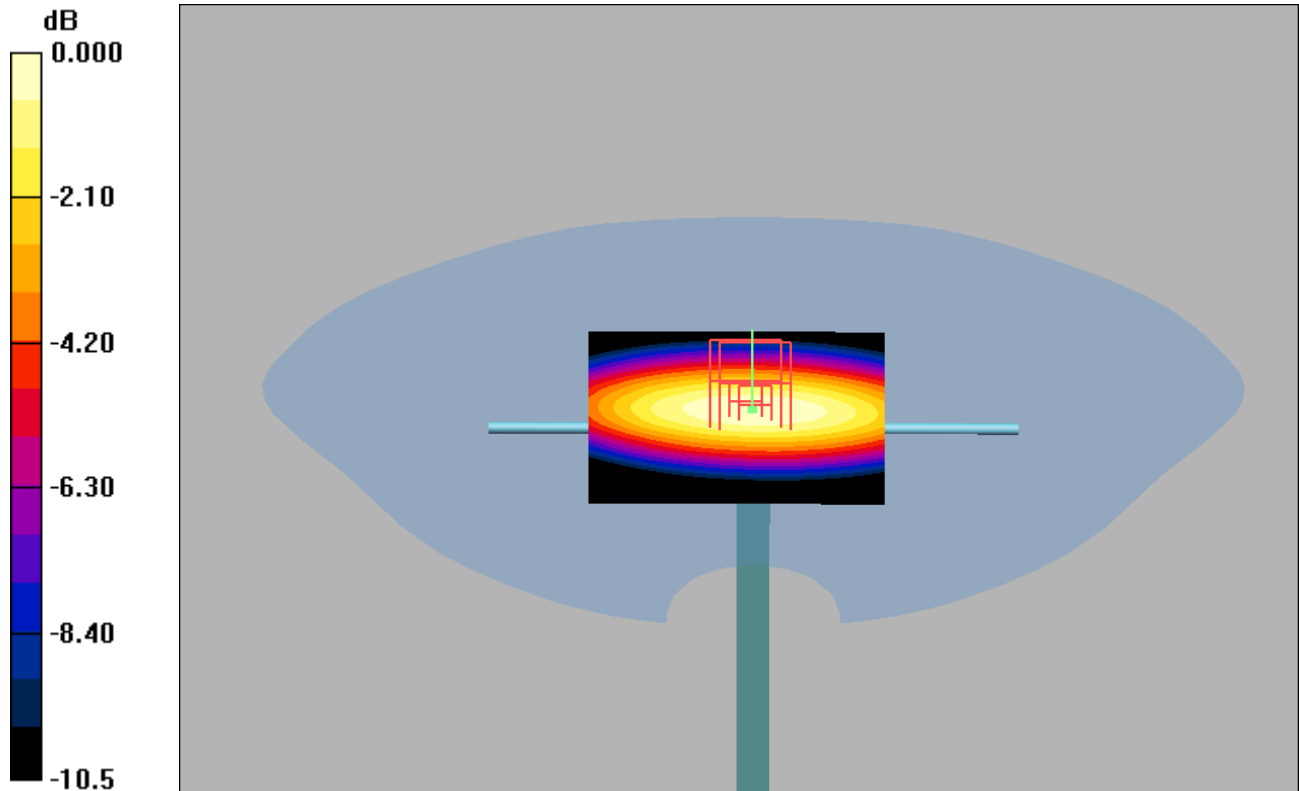
Reference Value = 35.1 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.965 mW/g; SAR(10 g) = 0.631 mW/g

Procedure Notes: Pin: before 99.3 mW / after 100 mW

Humidity - 41 % Ambient Temp - 24 C Simulant Temp - 23.7 C



0 dB = 1.04mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_835Head_438_1023_08July09_T01

File Name: [Validation_835Head_438_1023_08July09_T01.da4](#)

Phantom: SAM with CRP (Low Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39) Duty Cycle: 1:1 Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.893 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.999 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.6 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.930 mW/g; SAR(10 g) = 0.609 mW/g

Maximum value of SAR (measured) = 1.01 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.6 V/m; Power Drift = 0.027 dB

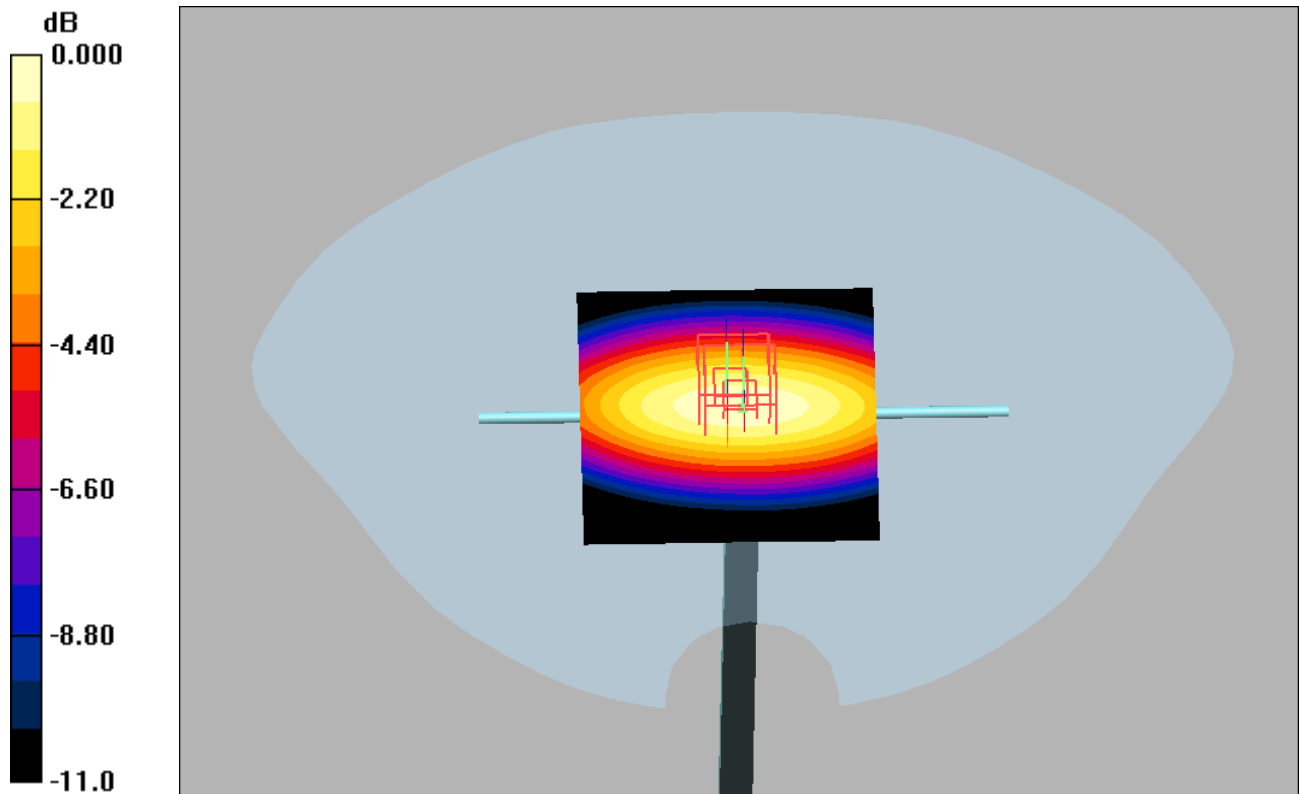
Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.627 mW/g

Maximum value of SAR (measured) = 1.03 mW/g

Procedure Notes: Pin: before 99.2 mW / after 99.8 mW

Humidity - 40.4 % Ambient Temp - 24.3 C Simulant Temp - 24 C



0 dB = 1.03mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_835Head_438_1023_06July09_T01

File Name: [Validation_835Head_438_1023_06July09_T01.da4](#)

Phantom: SAM with CRP (Low Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39) Duty Cycle: 1:1 Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.908 \text{ mho/m}$; $\epsilon_r = 42.3$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASy4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.05 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.3 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.981 mW/g; SAR(10 g) = 0.640 mW/g

Maximum value of SAR (measured) = 1.06 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.3 V/m; Power Drift = 0.033 dB

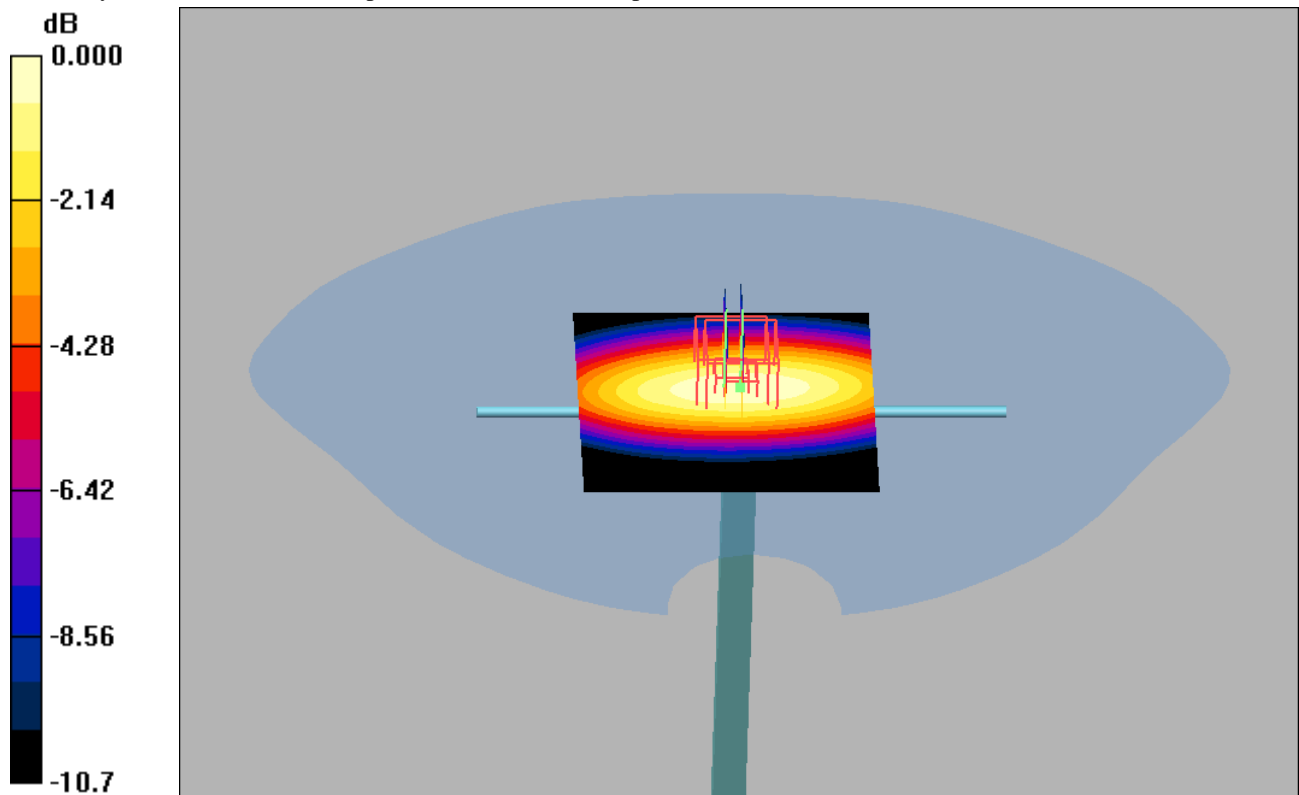
Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.995 mW/g; SAR(10 g) = 0.650 mW/g

Maximum value of SAR (measured) = 1.07 mW/g

Procedure Notes: Pin: before 99.8 mW / after 100.8 mW

Humidity - 39.5 % Ambient Temp - 24.1 C Simulant Temp - 23.9 C



0 dB = 1.07mW/g

APPLICANT: Sony Ericsson Mobile Communications Inc.

FCC ID: **PY7A3880033**



Sony Ericsson

REPORT

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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_835Body_438_1031_17June09_T01

File Name: [Validation_835Body_438_1031_17June09_T01.da4](#)

Phantom: SAM with CRP (Low Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(5.53, 5.53, 5.53) Duty Cycle: 1:1 Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.959 \text{ mho/m}$; $\epsilon_r = 56.1$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASy4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.06 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.7 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.988 mW/g; SAR(10 g) = 0.654 mW/g

Maximum value of SAR (measured) = 1.08 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.7 V/m; Power Drift = 0.027 dB

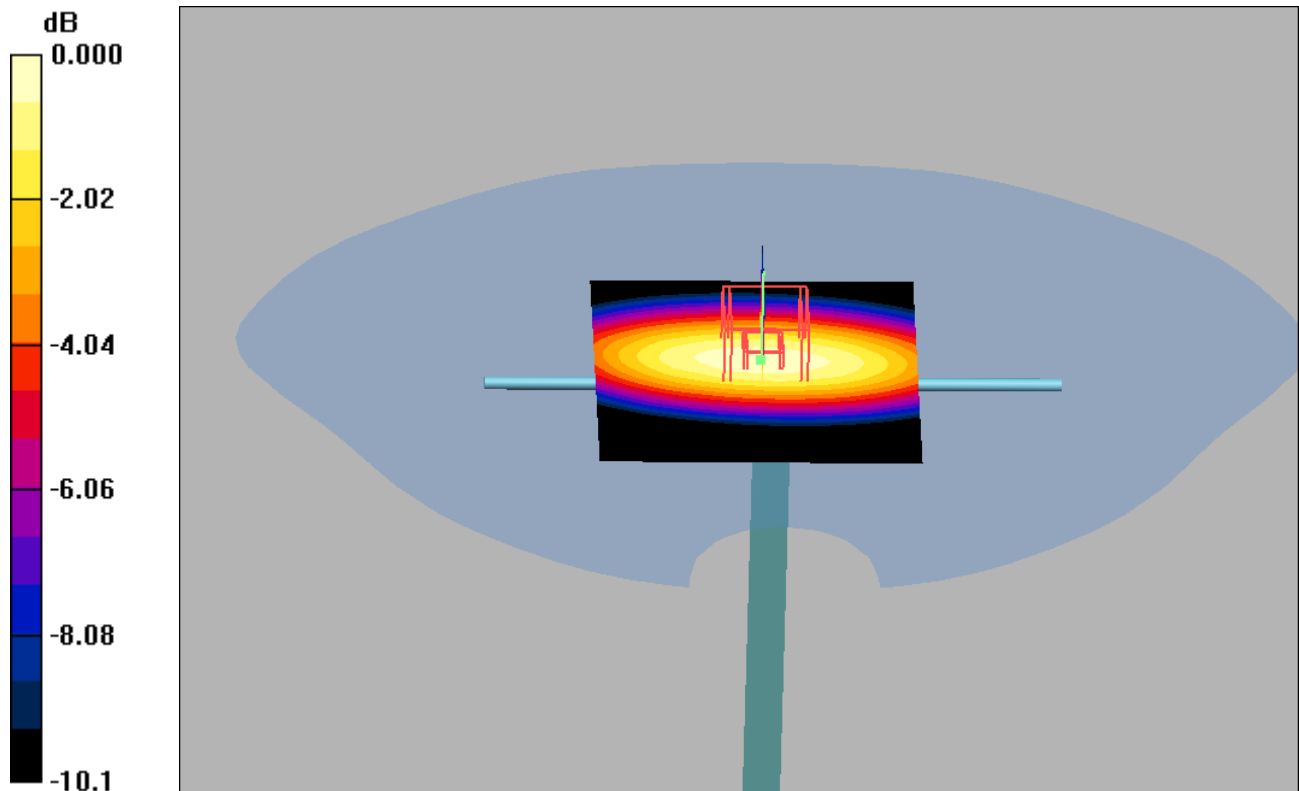
Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.670 mW/g

Maximum value of SAR (measured) = 1.10 mW/g

Procedure Notes: Pin: before 100.5 mW / after 100.7 mW

Humidity - 42.7 % Ambient Temp - 23.6 C Simulant Temp - 23.3 C



0 dB = 1.10mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_835Body_438_1031_13July09_T01

File Name: [Validation_835Body_438_1031_13July09_T01.da4](#)

Phantom: SAM with CRP (Low Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(5.53, 5.53, 5.53) Duty Cycle: 1:1 Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.965 \text{ mho/m}$; $\epsilon_r = 56.2$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DAS4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.972 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.9 V/m; Power Drift = -0.177 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.933 mW/g; SAR(10 g) = 0.614 mW/g

Maximum value of SAR (measured) = 1.02 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.9 V/m; Power Drift = -0.177 dB

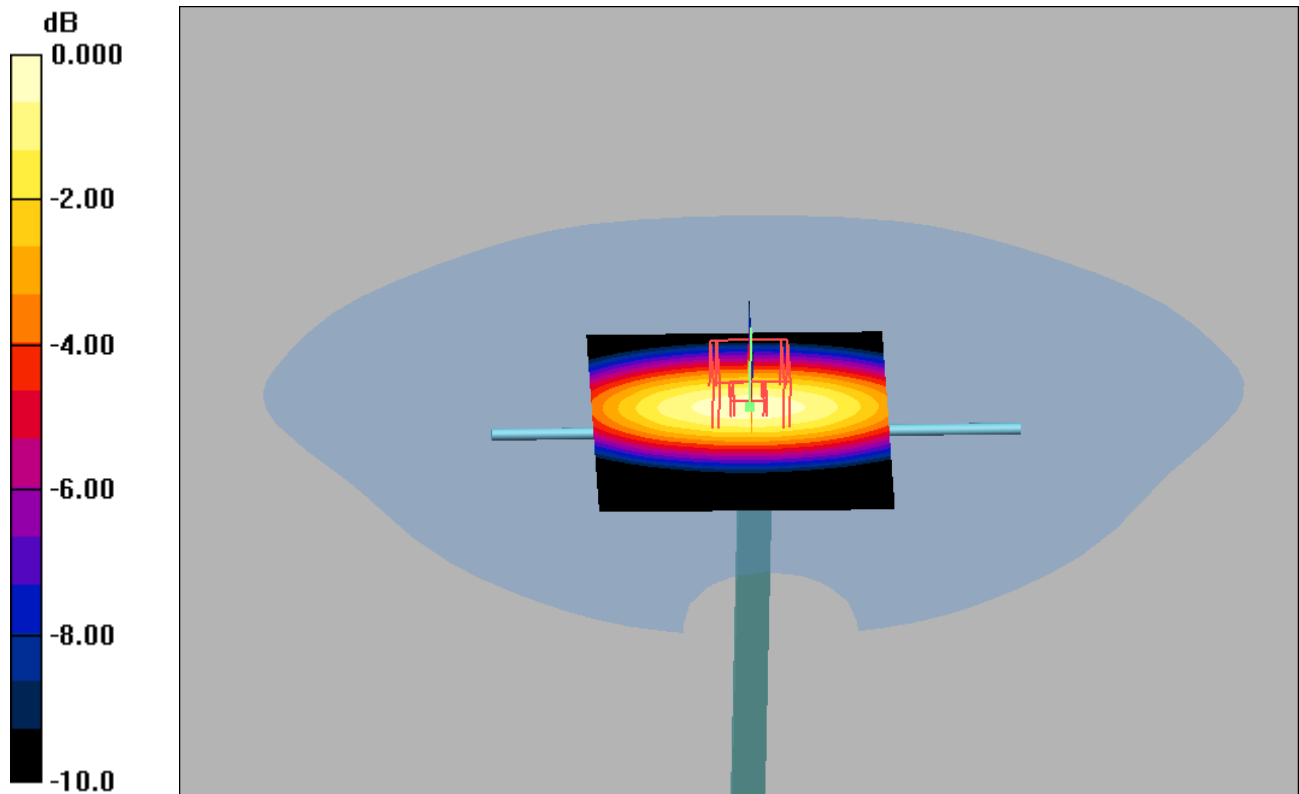
Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.941 mW/g; SAR(10 g) = 0.619 mW/g

Maximum value of SAR (measured) = 1.03 mW/g

Procedure Notes: Pin: before 99.6 mW / after 99.4 mW

Humidity - 42.9 % Ambient Temp - 23.4 C Simulant Temp - 23 C



0 dB = 1.03mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Head_536_1054_24June09_T01

File Name: [Validation_1900Head_536_1054_24June09_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 4.71 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.8 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 6.83 W/kg

SAR(1 g) = 3.75 mW/g; SAR(10 g) = 1.95 mW/g

Maximum value of SAR (measured) = 4.18 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.8 V/m; Power Drift = 0.014 dB

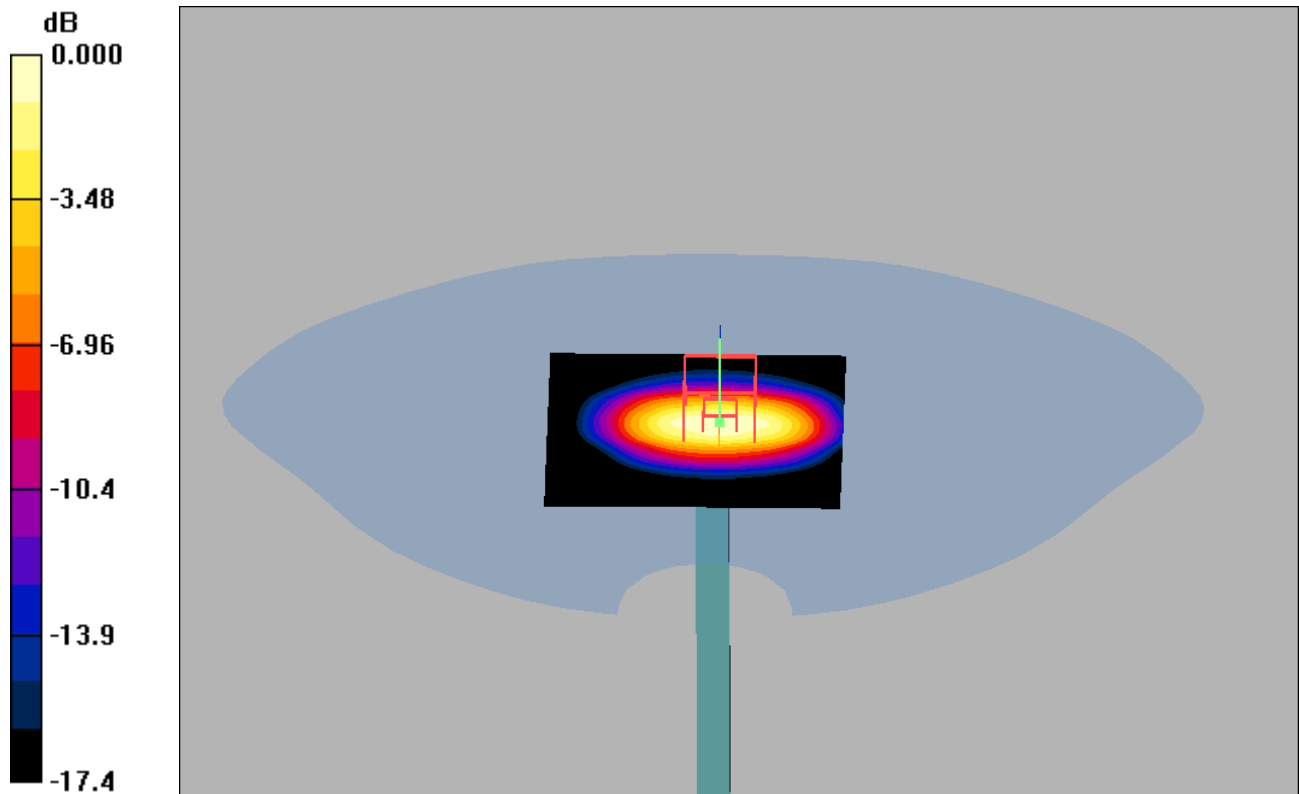
Peak SAR (extrapolated) = 7.19 W/kg

SAR(1 g) = 3.93 mW/g; SAR(10 g) = 2.05 mW/g

Maximum value of SAR (measured) = 4.44 mW/g

Procedure Notes: Pin: before 100.2 mW / after 100 mW

Humidity: 42 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C



0 dB = 4.44mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Head_536_1054_21June09_T01

File Name: [Validation_1900Head_536_1054_21June09_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.3$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 4.72 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.9 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 6.70 W/kg

SAR(1 g) = 3.73 mW/g; SAR(10 g) = 1.96 mW/g

Maximum value of SAR (measured) = 4.19 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.9 V/m; Power Drift = -0.006 dB

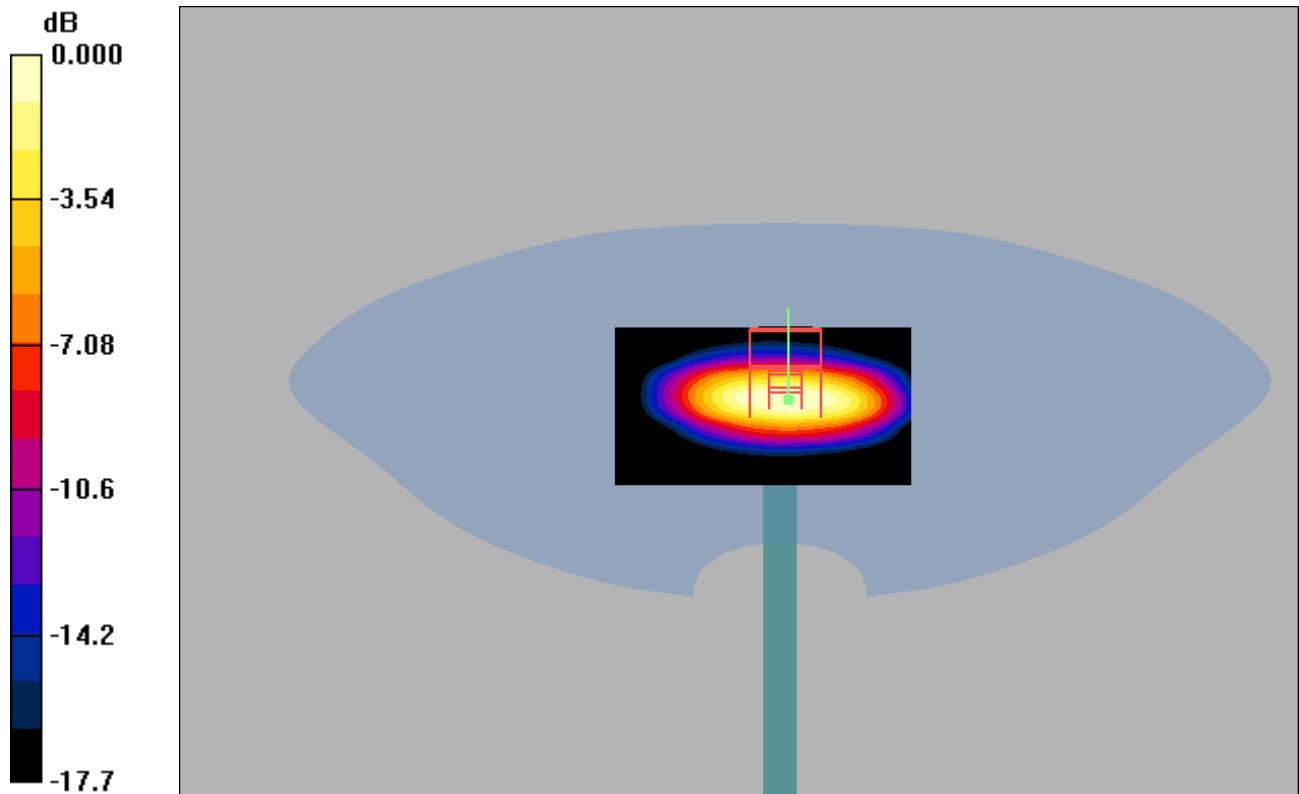
Peak SAR (extrapolated) = 7.26 W/kg

SAR(1 g) = 3.99 mW/g; SAR(10 g) = 2.09 mW/g

Maximum value of SAR (measured) = 4.32 mW/g

Procedure Notes: Pin: before 100 mW / after 100 mW

Humidity: 41.1 % Ambient Temp: 23.9 C Simulant Temp: 23.7 C



0 dB = 4.32mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Head_536_1335_13July09_T01

File Name: [Validation_1900Head_536_1335_13July09_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)Duty Cycle: 1:1Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.47 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 4.95 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 58.2 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 6.69 W/kg

SAR(1 g) = 3.88 mW/g; SAR(10 g) = 2.05 mW/g

Maximum value of SAR (measured) = 4.40 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 58.2 V/m; Power Drift = 0.037 dB

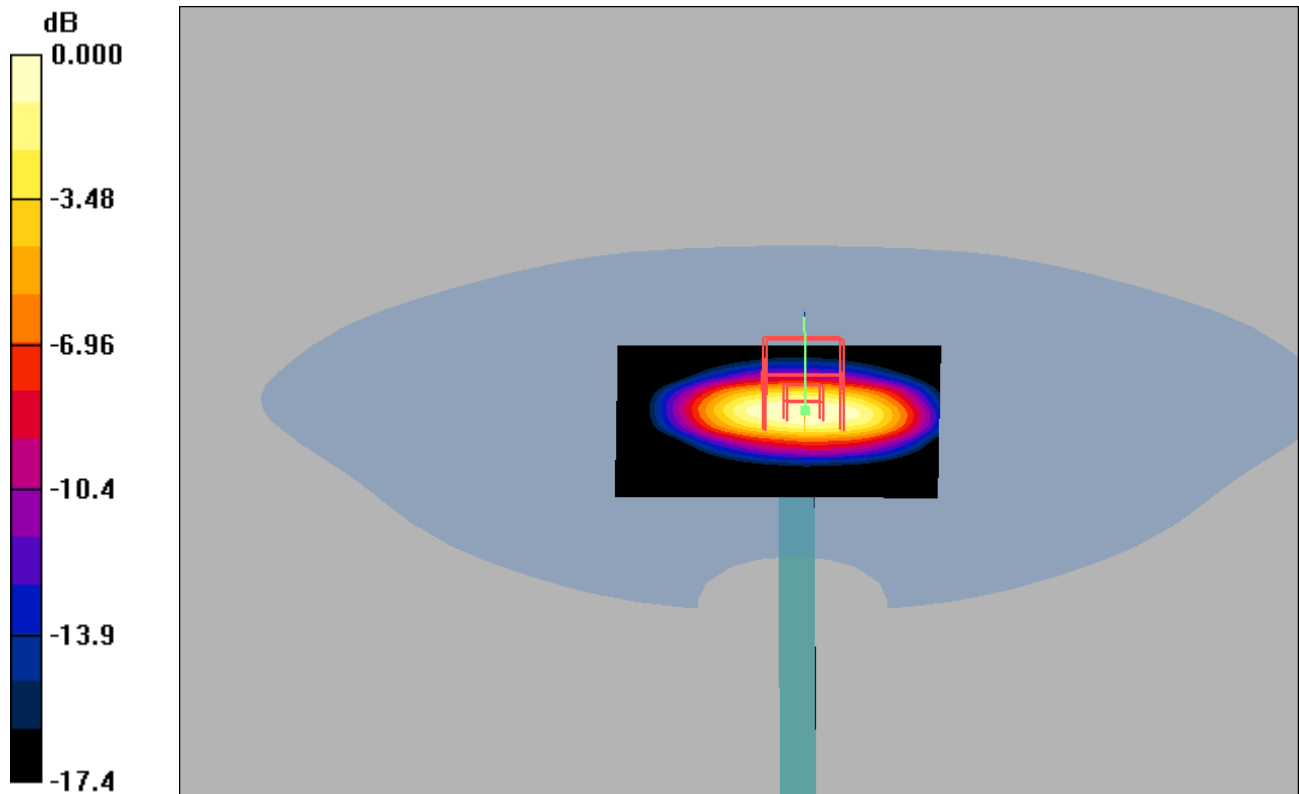
Peak SAR (extrapolated) = 6.67 W/kg

SAR(1 g) = 3.89 mW/g; SAR(10 g) = 2.05 mW/g

Maximum value of SAR (measured) = 4.41 mW/g

Procedure Notes: Pin: before 100.3 mW / after 100.4 mW

Humidity: 42.9 % Ambient Temp: 23.4 C Simulant Temp: 23 C



0 dB = 4.41mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Head_536_1054_08July09_T01

File Name: [Validation_1900Head_536_1054_08July09_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.47 \text{ mho/m}$; $\epsilon_r = 38.5$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 4.91 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.0 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 7.17 W/kg

SAR(1 g) = 3.92 mW/g; SAR(10 g) = 2.04 mW/g

Maximum value of SAR (measured) = 4.41 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.0 V/m; Power Drift = 0.009 dB

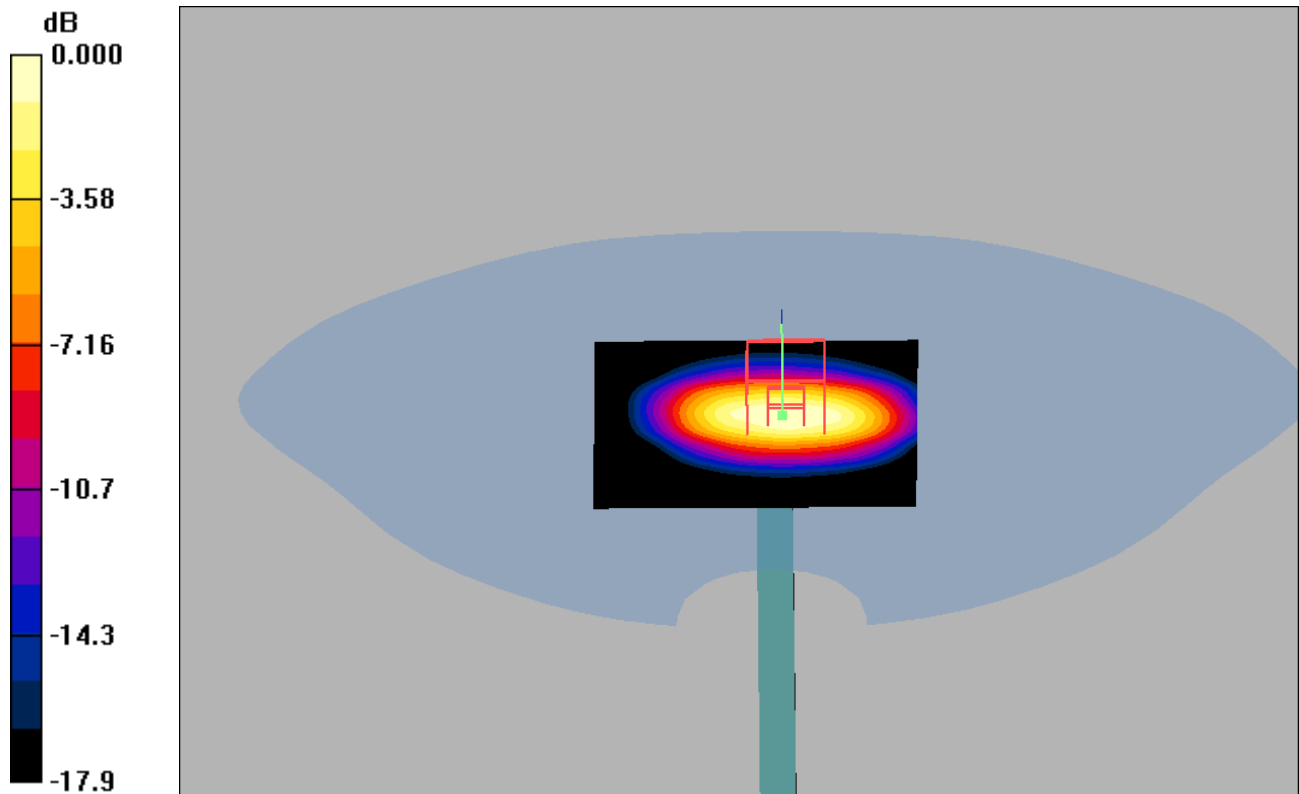
Peak SAR (extrapolated) = 7.39 W/kg

SAR(1 g) = 4 mW/g; SAR(10 g) = 2.08 mW/g

Maximum value of SAR (measured) = 4.50 mW/g

Procedure Notes: Pin: before 99.8 mW / after 100 mW

Humidity: 40.4 % Ambient Temp: 24.3 C Simulant Temp: 24 C



0 dB = 4.50mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Head_536_1054_07July09_T01

File Name: [Validation_1900Head_536_1054_07July09_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 4.93 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.6 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 7.23 W/kg

SAR(1 g) = 3.92 mW/g; SAR(10 g) = 2.04 mW/g

Maximum value of SAR (measured) = 4.42 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.6 V/m; Power Drift = 0.000 dB

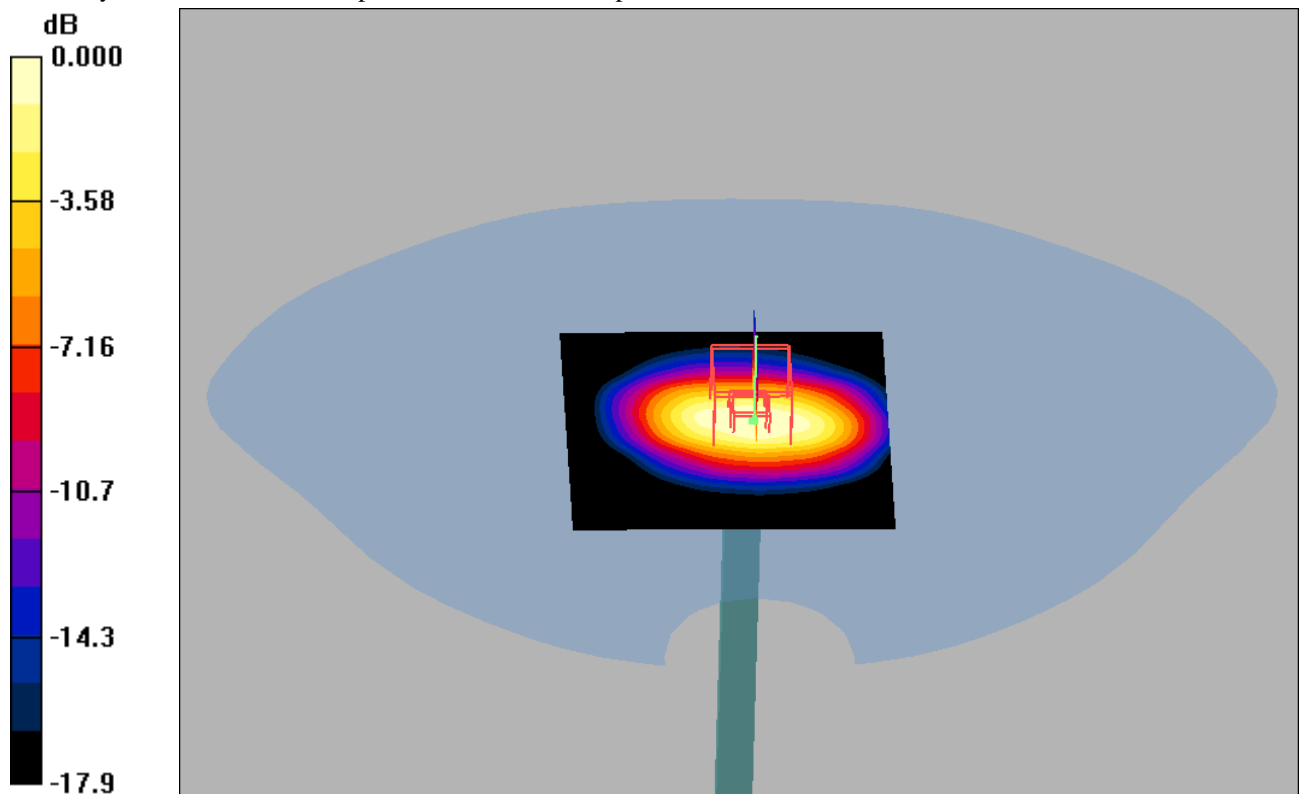
Peak SAR (extrapolated) = 7.28 W/kg

SAR(1 g) = 3.98 mW/g; SAR(10 g) = 2.07 mW/g

Maximum value of SAR (measured) = 4.40 mW/g

Procedure Notes: Pin: before 100.3 mW / after 100.4 mW

Humidity: 42.1 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C



0 dB = 4.40mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Head_536_1054_06July09_T01

File Name: [Validation_1900Head_536_1054_06July09_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.47 \text{ mho/m}$; $\epsilon_r = 38.9$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DAS4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 4.98 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.3 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 7.42 W/kg

SAR(1 g) = 4.02 mW/g; SAR(10 g) = 2.08 mW/g

Maximum value of SAR (measured) = 4.55 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.3 V/m; Power Drift = -0.022 dB

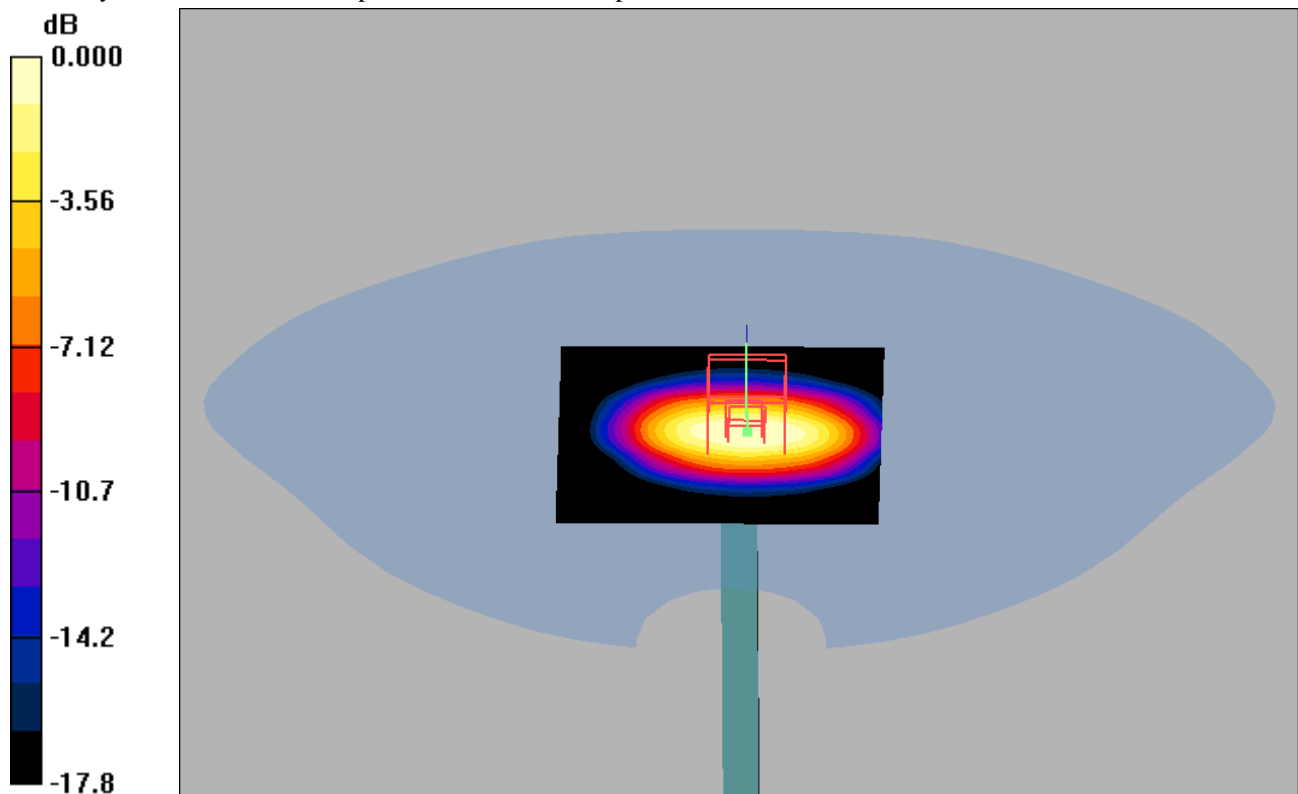
Peak SAR (extrapolated) = 7.44 W/kg

SAR(1 g) = 4.07 mW/g; SAR(10 g) = 2.12 mW/g

Maximum value of SAR (measured) = 4.50 mW/g

Procedure Notes: Pin: before 100.3 mW / after 100.4 mW

Humidity: 42.1 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C



0 dB = 4.50mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Body_536_1020_14July09_T01

File Name: [Validation_1900Body_536_1020_14July09_T01.da4](#)

Phantom: SAM with CRP (High Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(4.21, 4.21, 4.21) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\epsilon_r = 50.9$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DAS4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 5.12 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.0 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 7.25 W/kg

SAR(1 g) = 3.91 mW/g; SAR(10 g) = 2.04 mW/g

Maximum value of SAR (measured) = 4.38 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.0 V/m; Power Drift = 0.012 dB

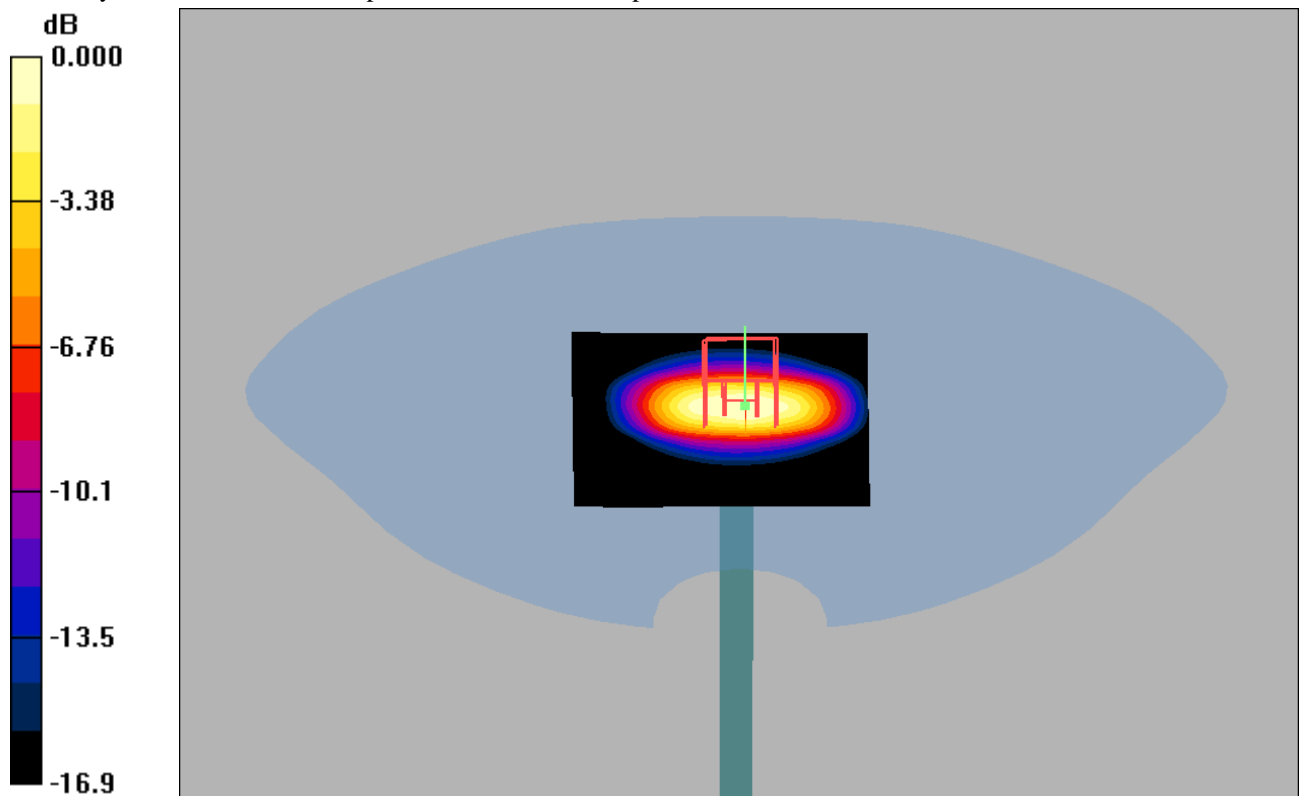
Peak SAR (extrapolated) = 7.35 W/kg

SAR(1 g) = 3.94 mW/g; SAR(10 g) = 2.05 mW/g

Maximum value of SAR (measured) = 4.44 mW/g

Procedure Notes: Pin: before 99.8 mW / after 100.3 mW

Humidity - 40.5 % Ambient Temp - 23.2 C Simulant Temp - 23 C



0 dB = 4.44mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation_1900Body_536_1020_16June09_T01

File Name: [Validation_1900Body_536_1020_16June09_T01.da4](#)

Phantom: SAM with CRP (High Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(4.21, 4.21, 4.21) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 51.4$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DAS4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 5.28 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.2 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 7.47 W/kg

SAR(1 g) = 4.06 mW/g; SAR(10 g) = 2.12 mW/g

Maximum value of SAR (measured) = 4.53 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.2 V/m; Power Drift = -0.008 dB

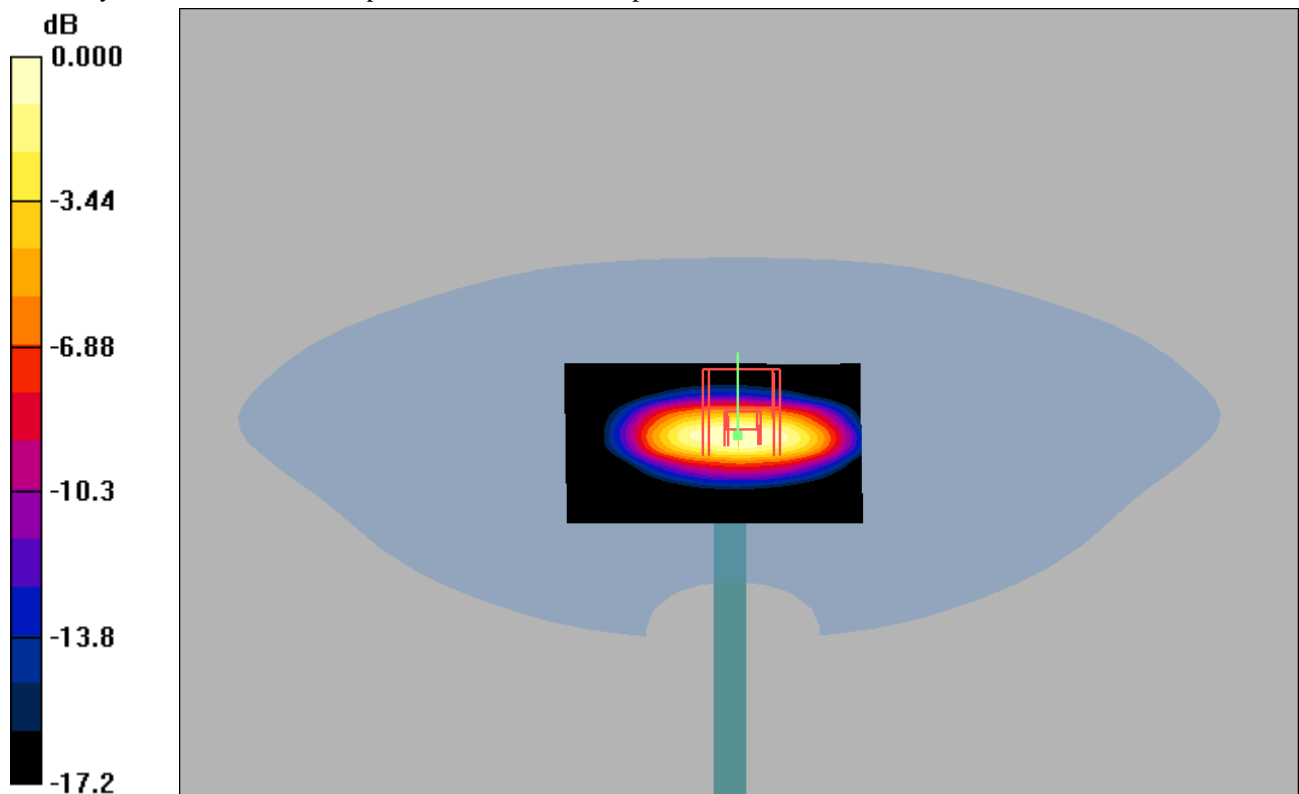
Peak SAR (extrapolated) = 7.72 W/kg

SAR(1 g) = 4.16 mW/g; SAR(10 g) = 2.17 mW/g

Maximum value of SAR (measured) = 4.68 mW/g

Procedure Notes: Pin: before 100.8 mW / after 99 mW

Humidity - 41.6 % Ambient Temp - 23.7 C Simulant Temp - 23.3 C



0 dB = 4.68mW/g



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2450 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation 2450Head 702 1251 16July09 T01

File Name: [Validation 2450Head 702 1251 16July09 T01.da4](#)

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51) Duty Cycle: 1:1 Frequency: 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.88 \text{ mho/m}$; $\epsilon_r = 39$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 6.13 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.3 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 12.4 W/kg

SAR(1 g) = 5.01 mW/g; SAR(10 g) = 2.23 mW/g

Maximum value of SAR (measured) = 5.49 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.3 V/m; Power Drift = 0.018 dB

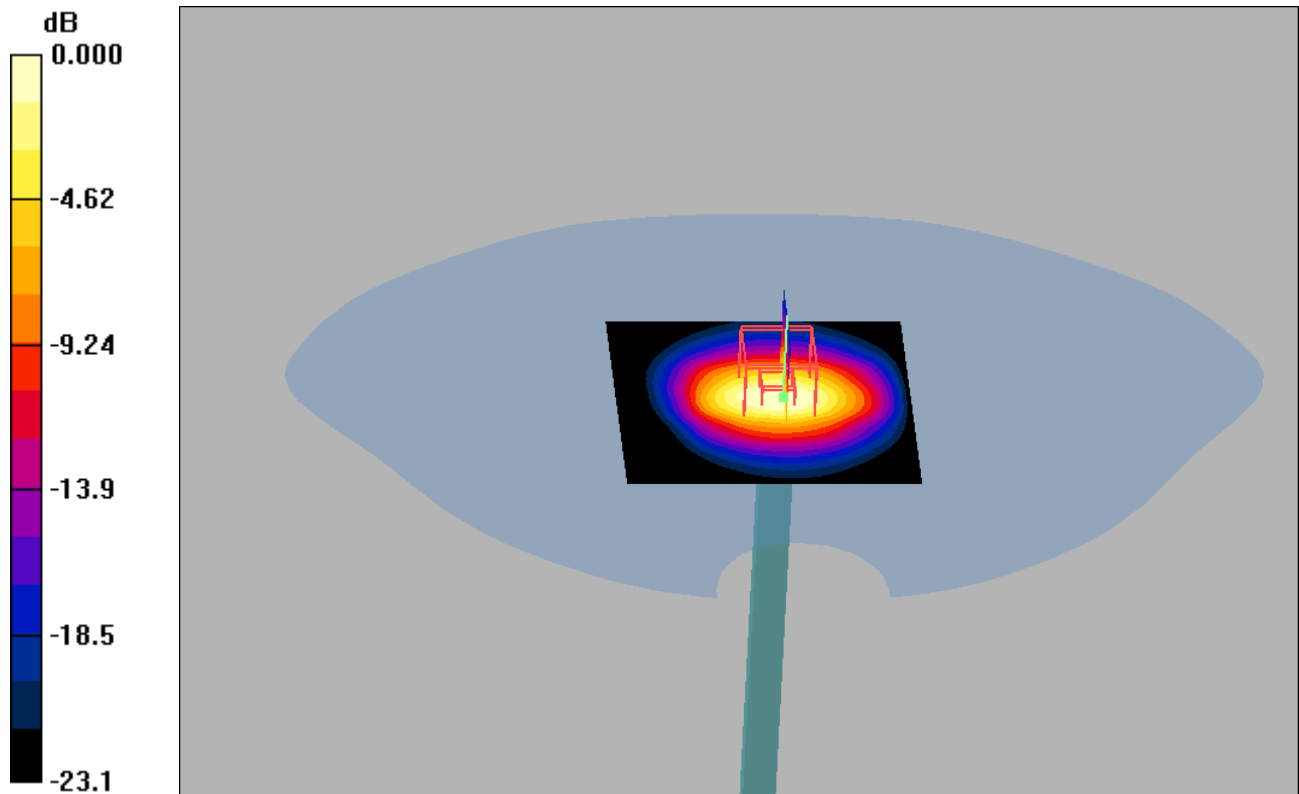
Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 5.18 mW/g; SAR(10 g) = 2.32 mW/g

Maximum value of SAR (measured) = 5.56 mW/g

Procedure Notes: Pin: before 100 mW / after 100.4 mW

Humidity: 40.7 % Ambient Temp: 23.7 C Simulant Temp: 23.6 C



0 dB = 5.56mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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2450 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation 2450Head 702 1251_15July09_T01

File Name: [Validation 2450Head 702 1251_15July09_T01.da4](#)

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51) Duty Cycle: 1:1 Frequency: 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.92 \text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 6.64 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.0 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 13.2 W/kg

SAR(1 g) = 5.28 mW/g; SAR(10 g) = 2.34 mW/g

Maximum value of SAR (measured) = 5.77 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.0 V/m; Power Drift = -0.002 dB

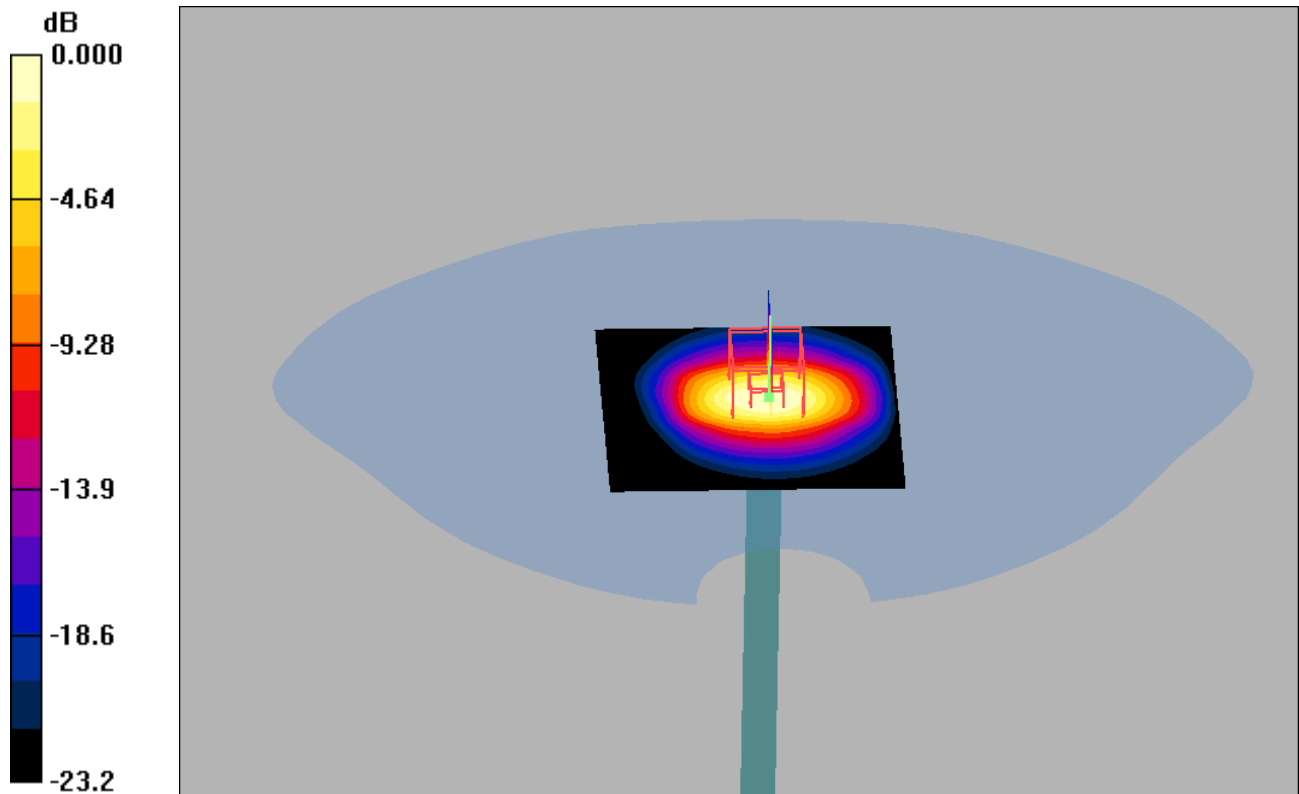
Peak SAR (extrapolated) = 13.2 W/kg

SAR(1 g) = 5.36 mW/g; SAR(10 g) = 2.39 mW/g

Maximum value of SAR (measured) = 5.83 mW/g

Procedure Notes: Pin: before 99 mW / after 99.2 mW

Humidity: 41.4 % Ambient Temp: 23.4 C Simulant Temp: 23.2 C



0 dB = 5.83mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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2450 MHz SAR Distribution of Validation Dipole Antenna System Performance Check.

Validation 2450Body 702_1251_14July09_T01

File Name: [Validation 2450Body 702_1251_14July09_T01.da4](#)

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(3.9, 3.9, 3.9) Duty Cycle: 1:1 Frequency: 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 51.1$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 7.13 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.2 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 15.1 W/kg

SAR(1 g) = 5.96 mW/g; SAR(10 g) = 2.63 mW/g

Maximum value of SAR (measured) = 6.56 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.2 V/m; Power Drift = -0.025 dB

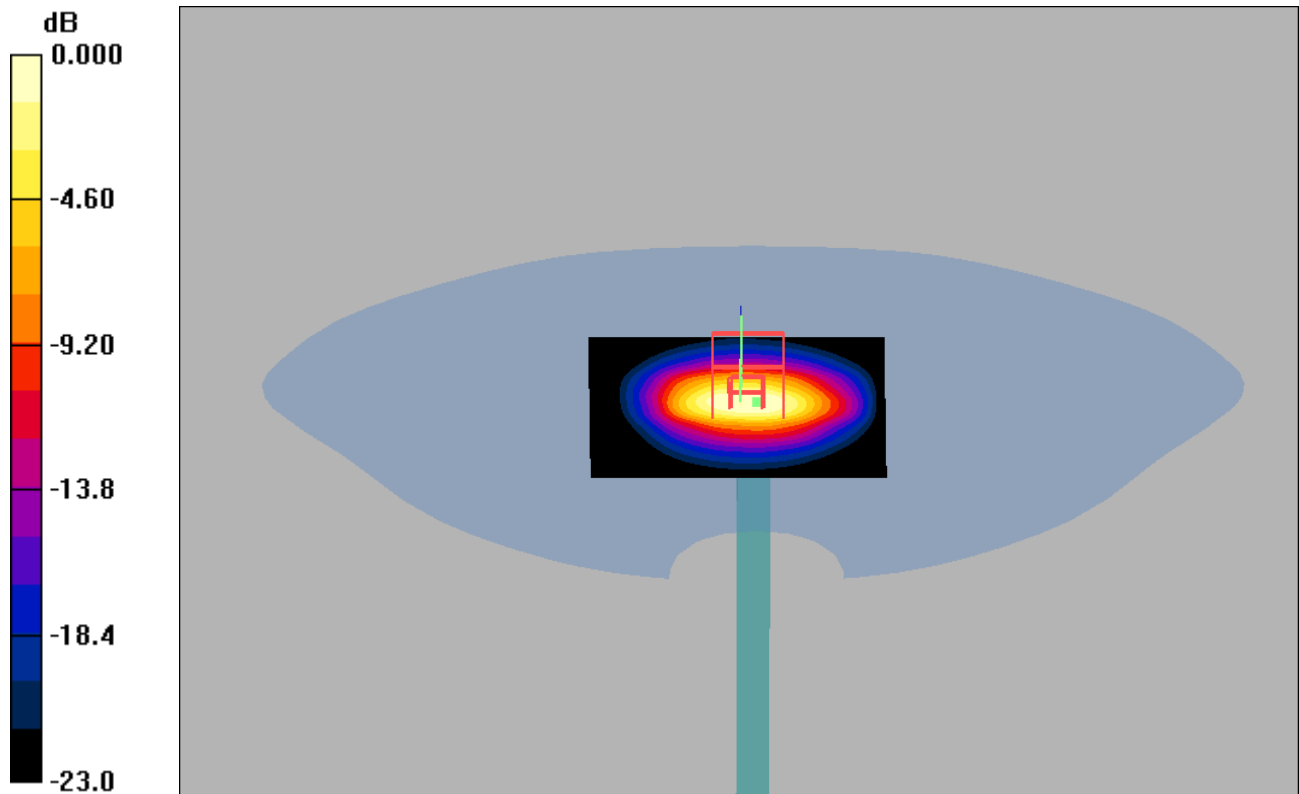
Peak SAR (extrapolated) = 15.0 W/kg

SAR(1 g) = 6 mW/g; SAR(10 g) = 2.67 mW/g

Maximum value of SAR (measured) = 6.40 mW/g

Procedure Notes: Pin: before 99.4 mW / after 100.2 mW

Humidity: 40.5 % Ambient Temp: 23.2 C Simulant Temp: 23 C



0 dB = 6.40mW/g



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Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

Closed Position



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800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 6/23/2009 10:10:36 AM

File Name: [23June09_Aino_GSM850_25YJ_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 824 \text{ MHz}$; $\sigma = 0.882 \text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 42 % Ambient Temp - 23.7 C Simulant Temp - 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.569 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.4 V/m; Power Drift = 0.080 dB

Peak SAR (extrapolated) = 0.732 W/kg

SAR(1 g) = 0.593 mW/g; SAR(10 g) = 0.446 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.642 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

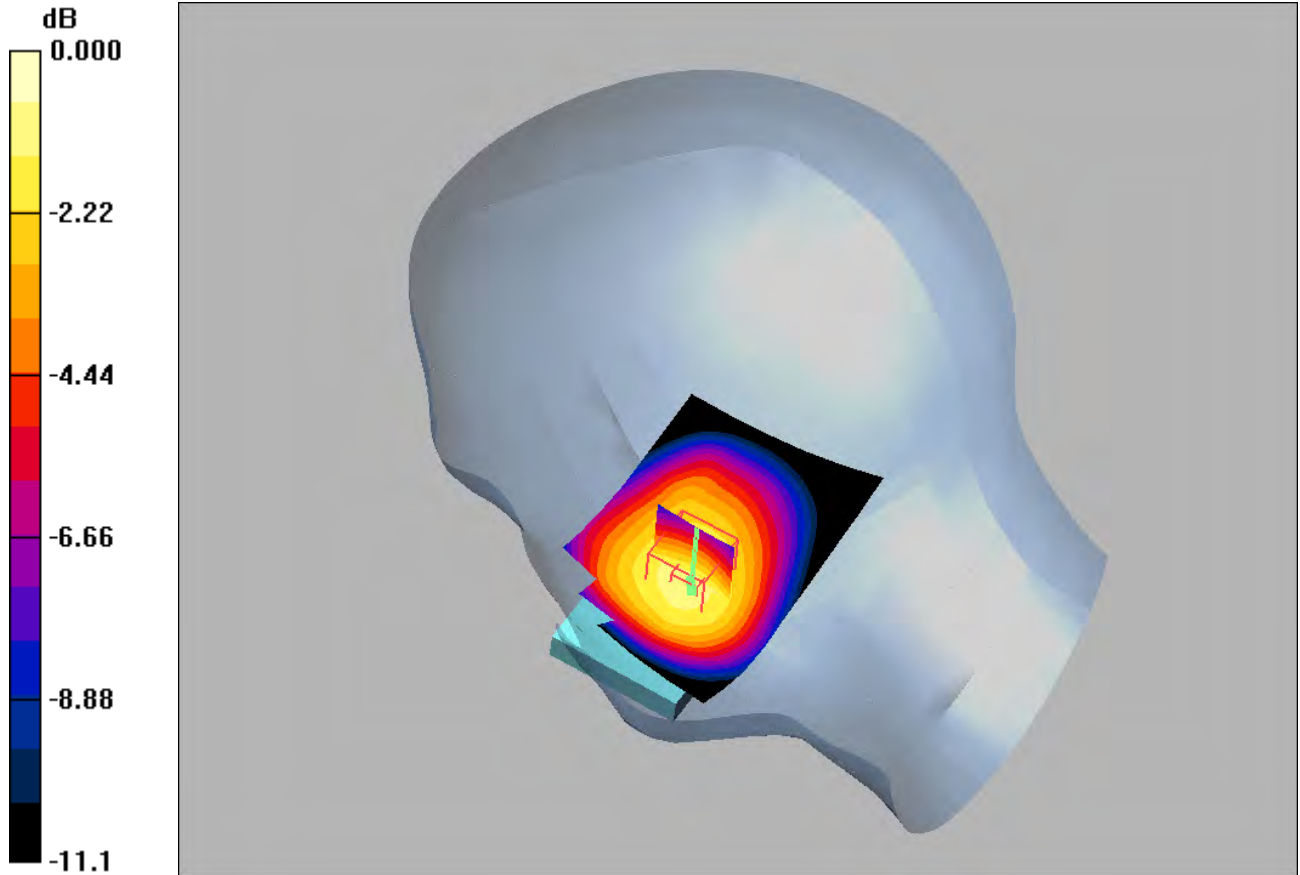
Reference Value = 12.4 V/m; Power Drift = 0.080 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.732 mW/g



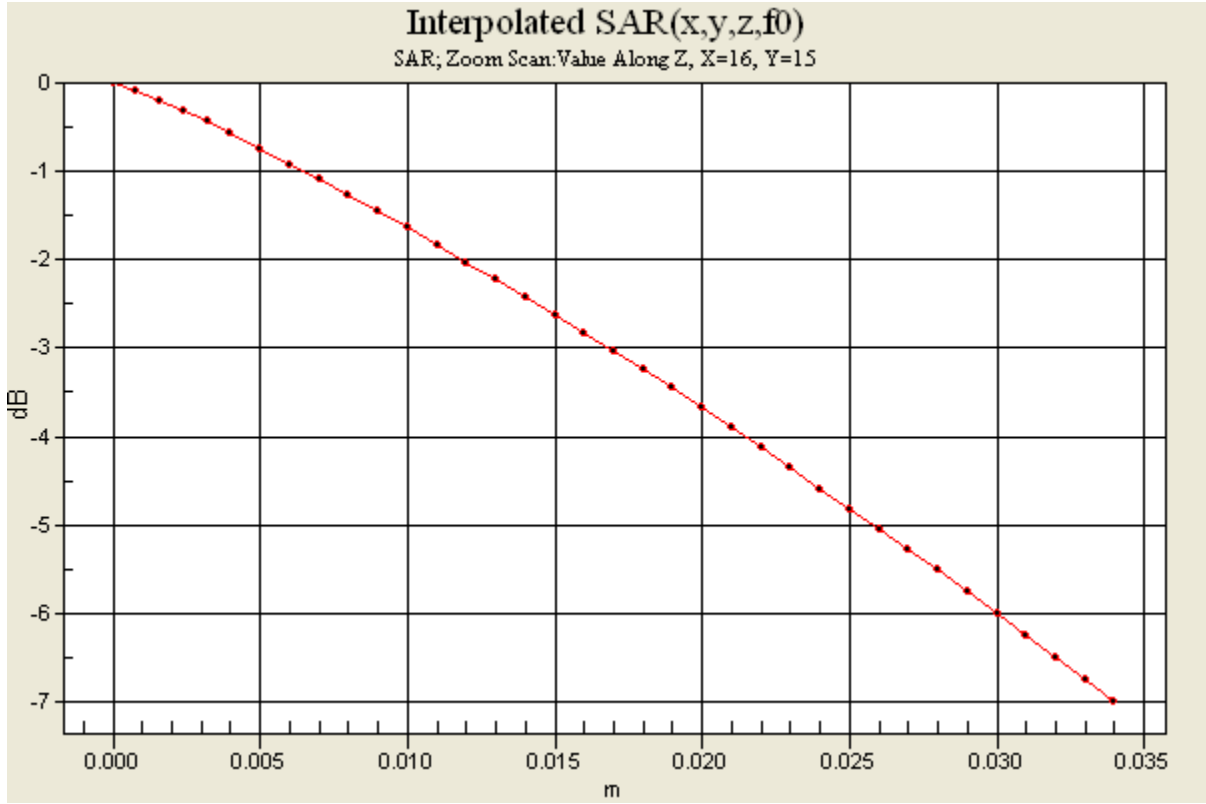
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0 dB = 0.732mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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800 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 6/23/2009 11:21:19 AM

File Name: [23June09_Aino_GSM850_25YJ_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 824 \text{ MHz}$; $\sigma = 0.882 \text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 42 % Ambient Temp - 23.7 C Simulant Temp - 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.501 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.1 V/m; Power Drift = 0.167 dB

Peak SAR (extrapolated) = 0.582 W/kg

SAR(1 g) = 0.471 mW/g; SAR(10 g) = 0.349 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.493 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

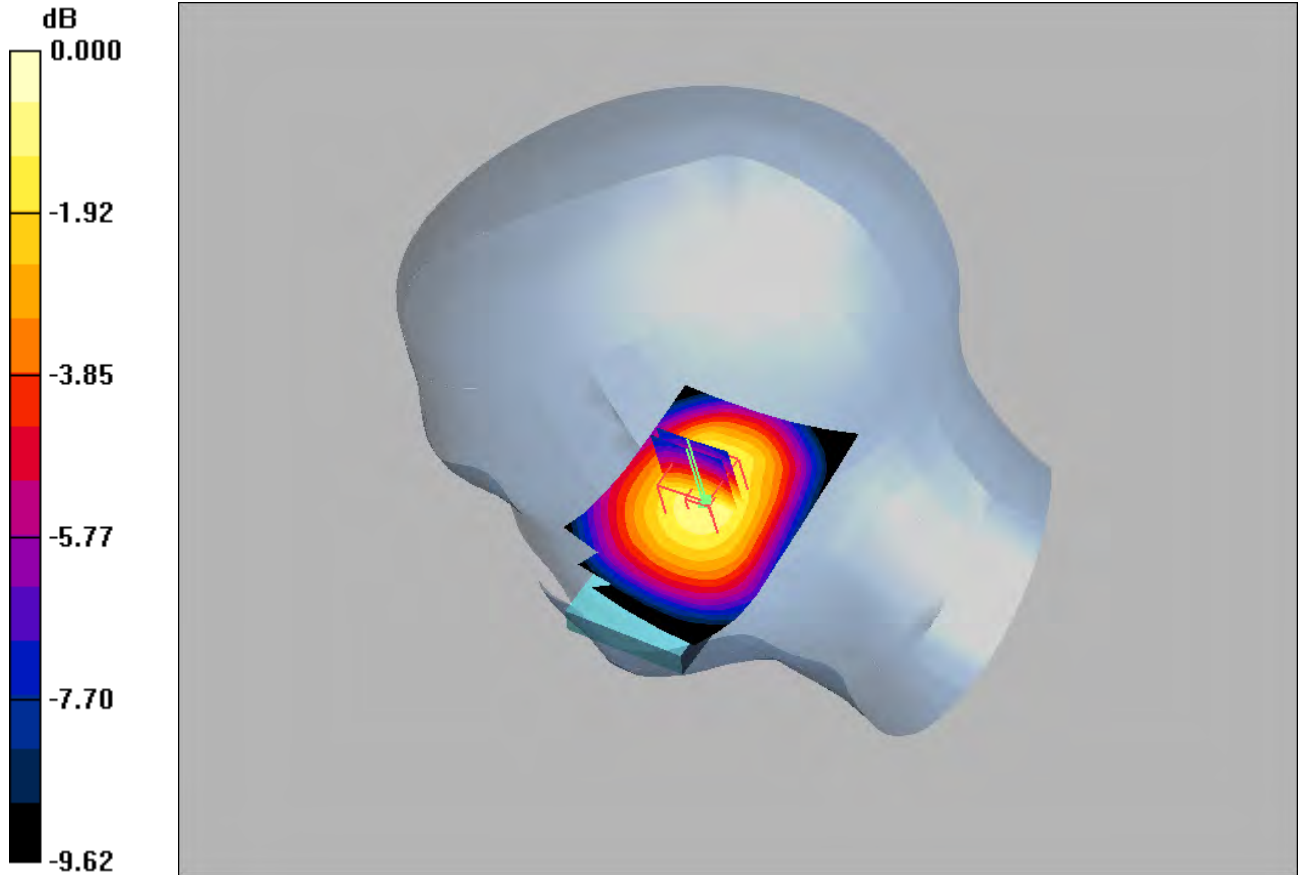
Reference Value = 20.1 V/m; Power Drift = 0.167 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.582 mW/g



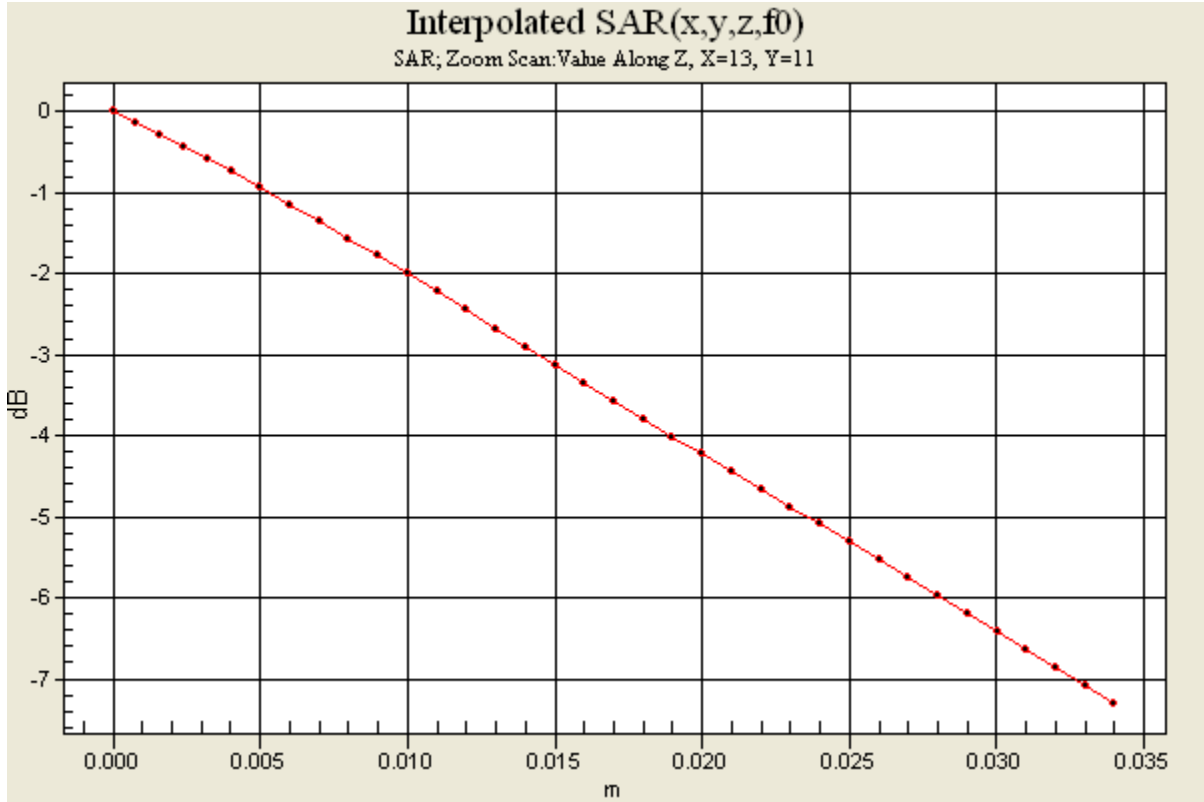
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0 dB = 0.582mW/g



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800 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 6/23/2009 8:27:07 AM

File Name: [23June09_Aino_GSM850_25YJ_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.907$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 42 % Ambient Temp - 23.7 C Simulant Temp - 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (51x91x1):

Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.663 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.837 W/kg

SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.450 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.660 mW/g

High channel cheek/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

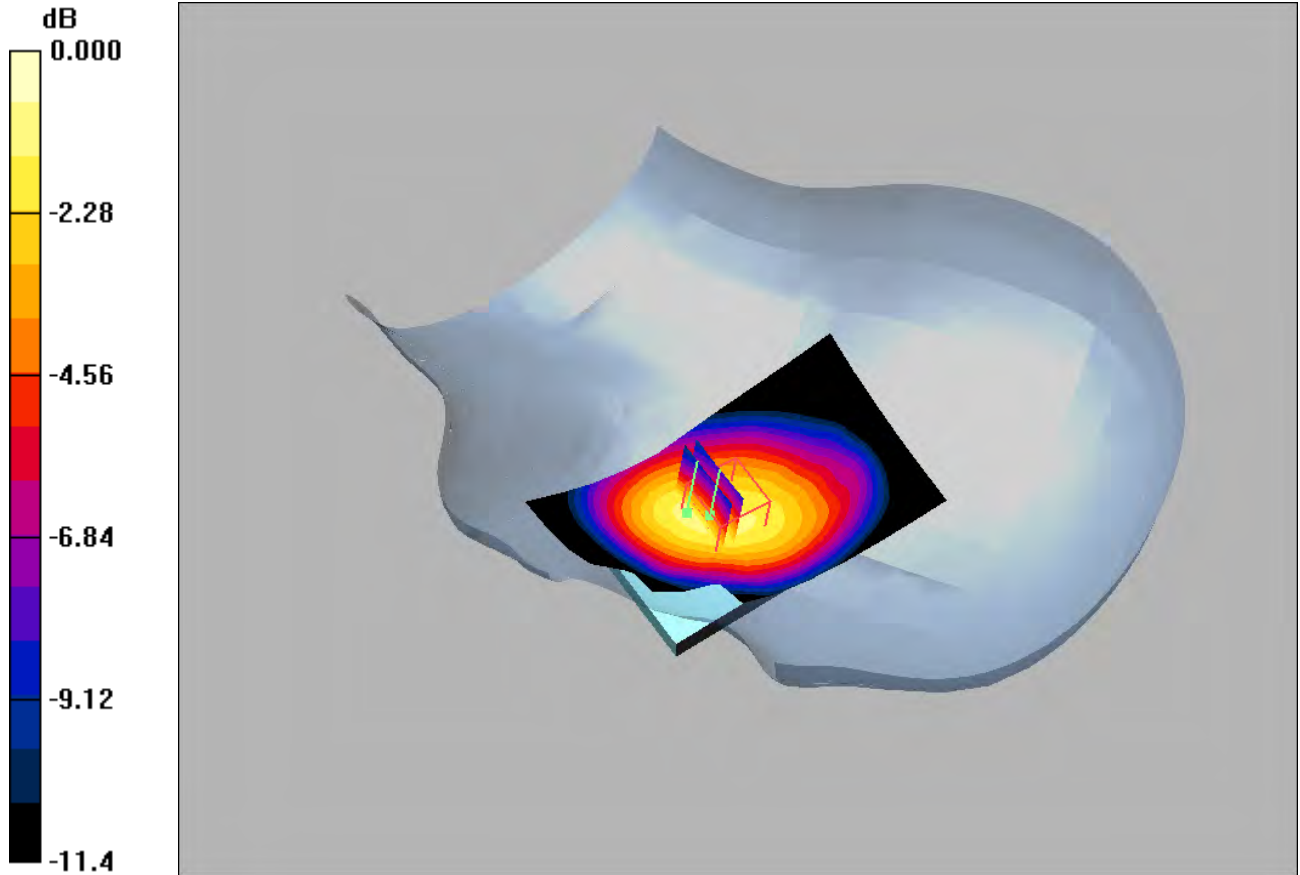
Reference Value = 11.3 V/m; Power Drift = 0.025 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.837 mW/g



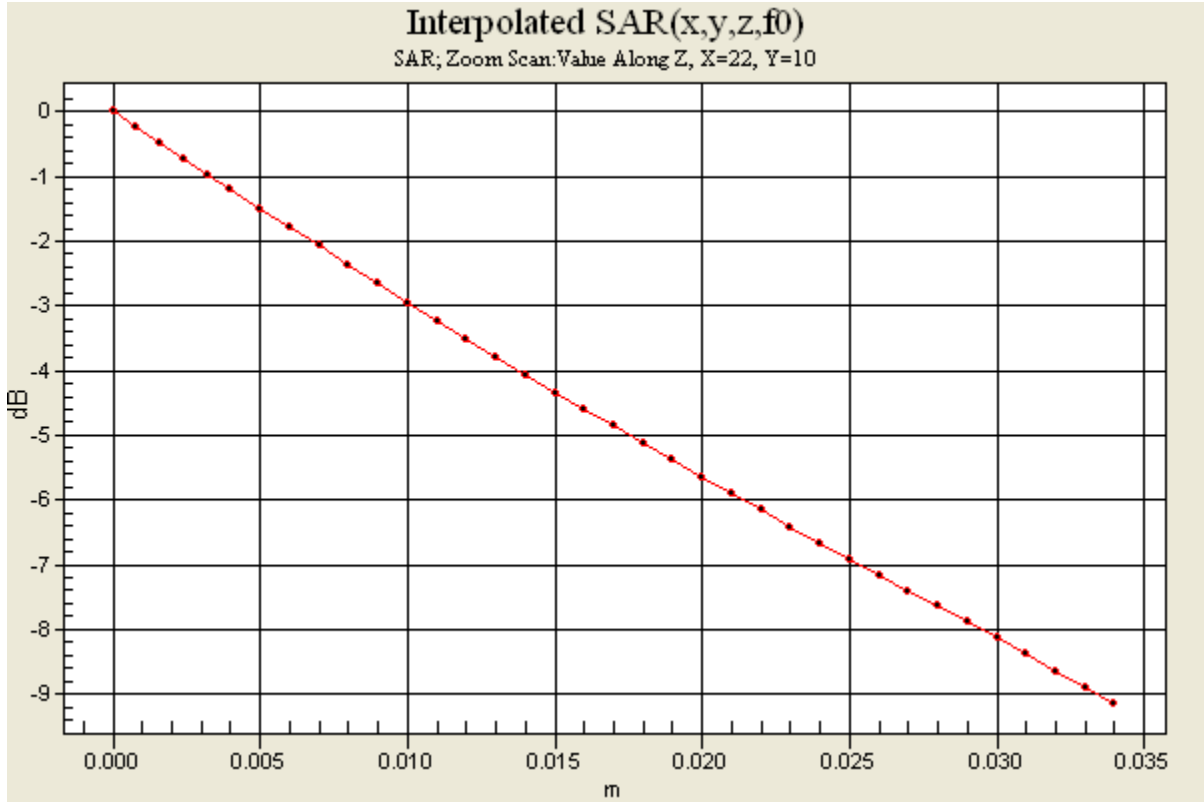
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0 dB = 0.837mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

800 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 6/23/2009 9:17:26 AM

File Name: [23June09_Aino_GSM850_25YJ_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head)Phantom section: Left Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 836 MHz; $\sigma = 0.894$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 42 % Ambient Temp - 23.7 C Simulant Temp - 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Middle channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.407 mW/g

Middle channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.2 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.499 W/kg

SAR(1 g) = 0.400 mW/g; SAR(10 g) = 0.296 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.423 mW/g

Middle channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

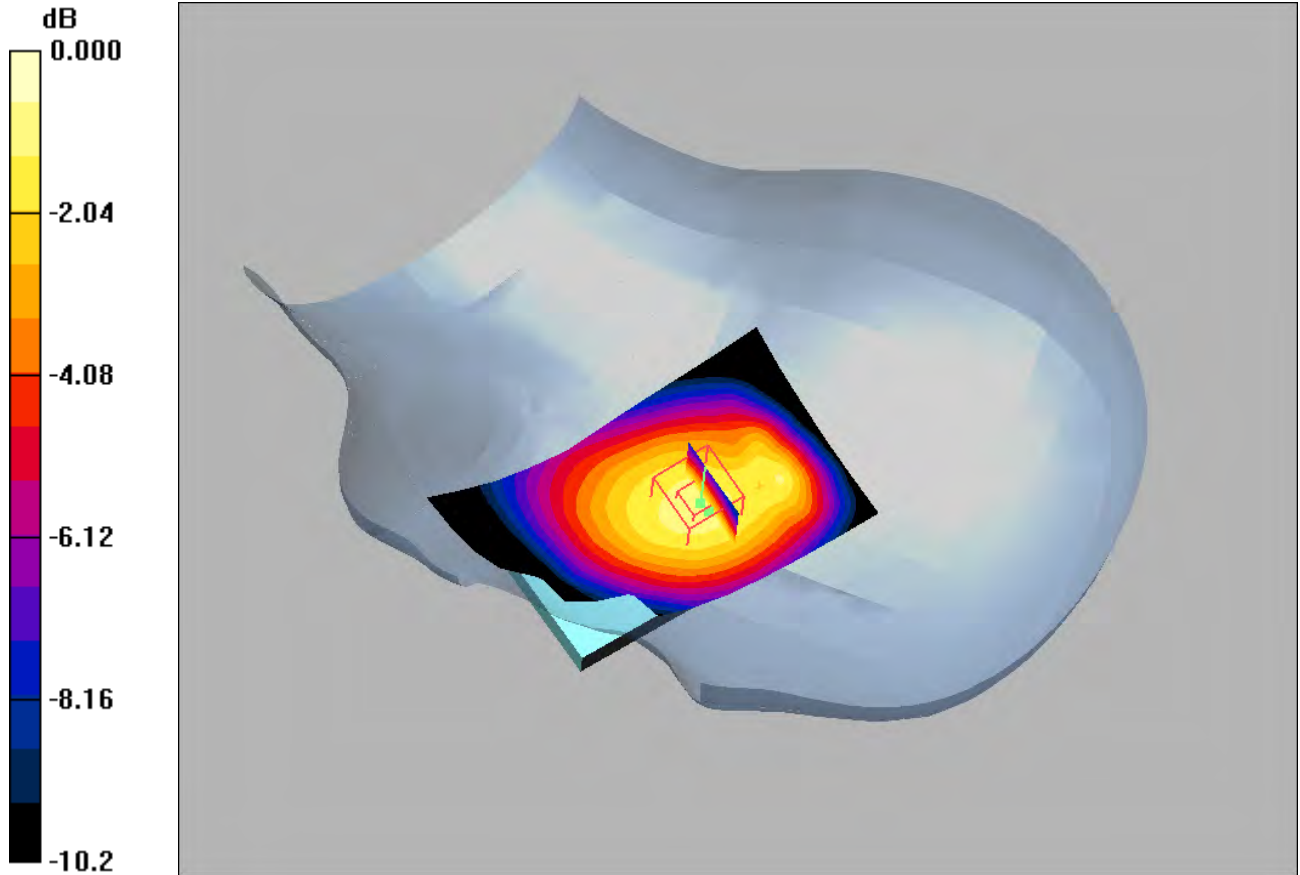
Reference Value = 18.2 V/m; Power Drift = 0.037 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.499 mW/g



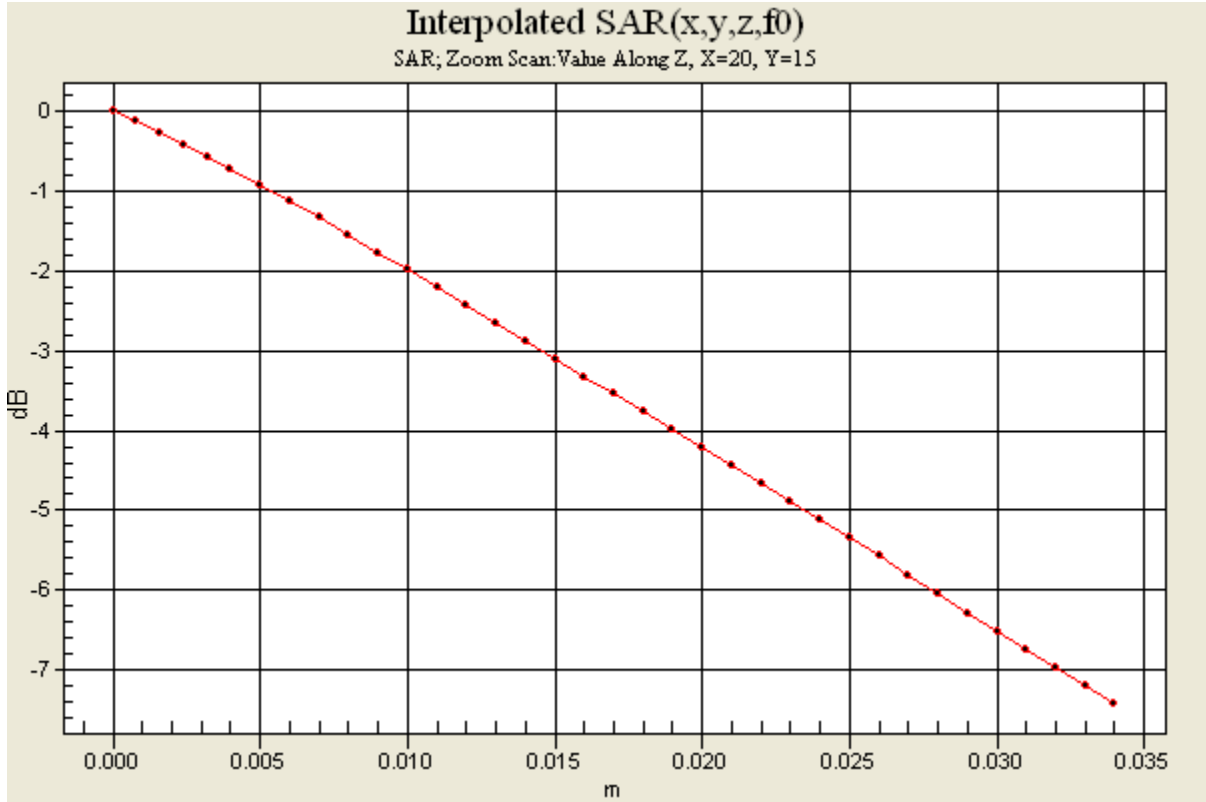
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0 dB = 0.499mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 6/24/2009 10:32:05 AM

File Name: [24June09_Aino_GSM1900_25ZM_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 42 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.392 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = -0.062 dB

Peak SAR (extrapolated) = 0.565 W/kg

SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.221 mW/g

Maximum value of SAR (measured) = 0.392 mW/g

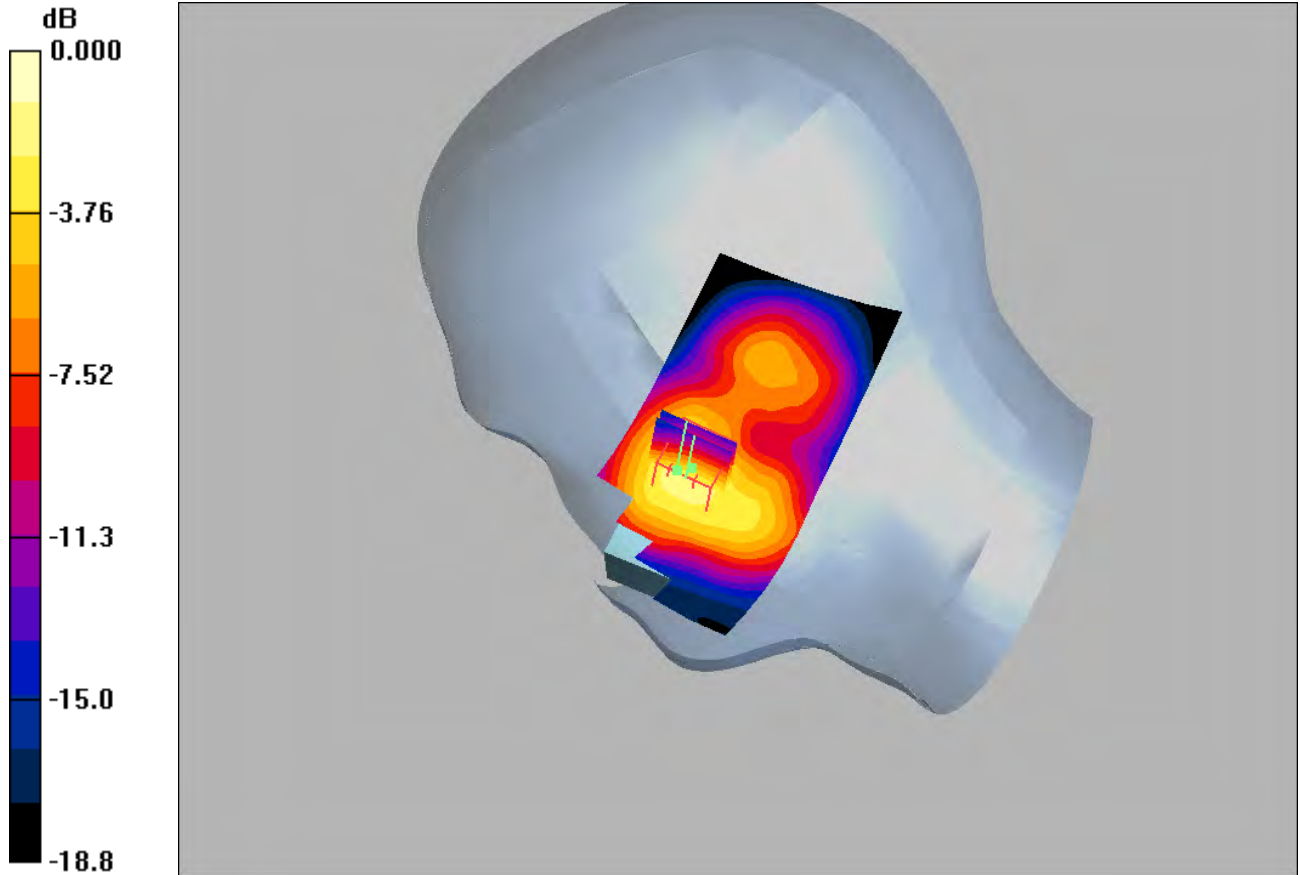
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = -0.062 dB

Maximum value of SAR (interpolated) = 0.565 mW/g



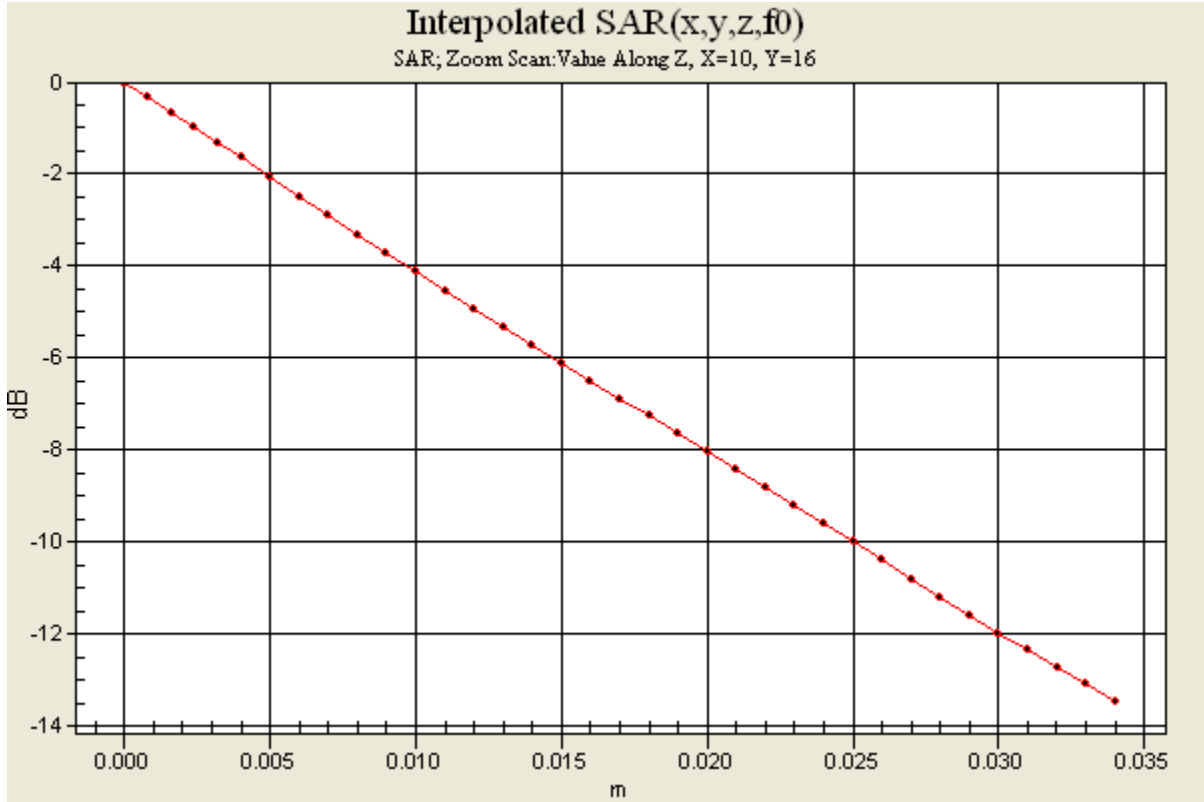
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.565mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 6/24/2009 11:40:33 AM

File Name: [24June09_Aino_GSM1900_25ZM_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 42 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel tilt/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.277 mW/g

High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.390 W/kg

SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.132 mW/g

Maximum value of SAR (measured) = 0.257 mW/g

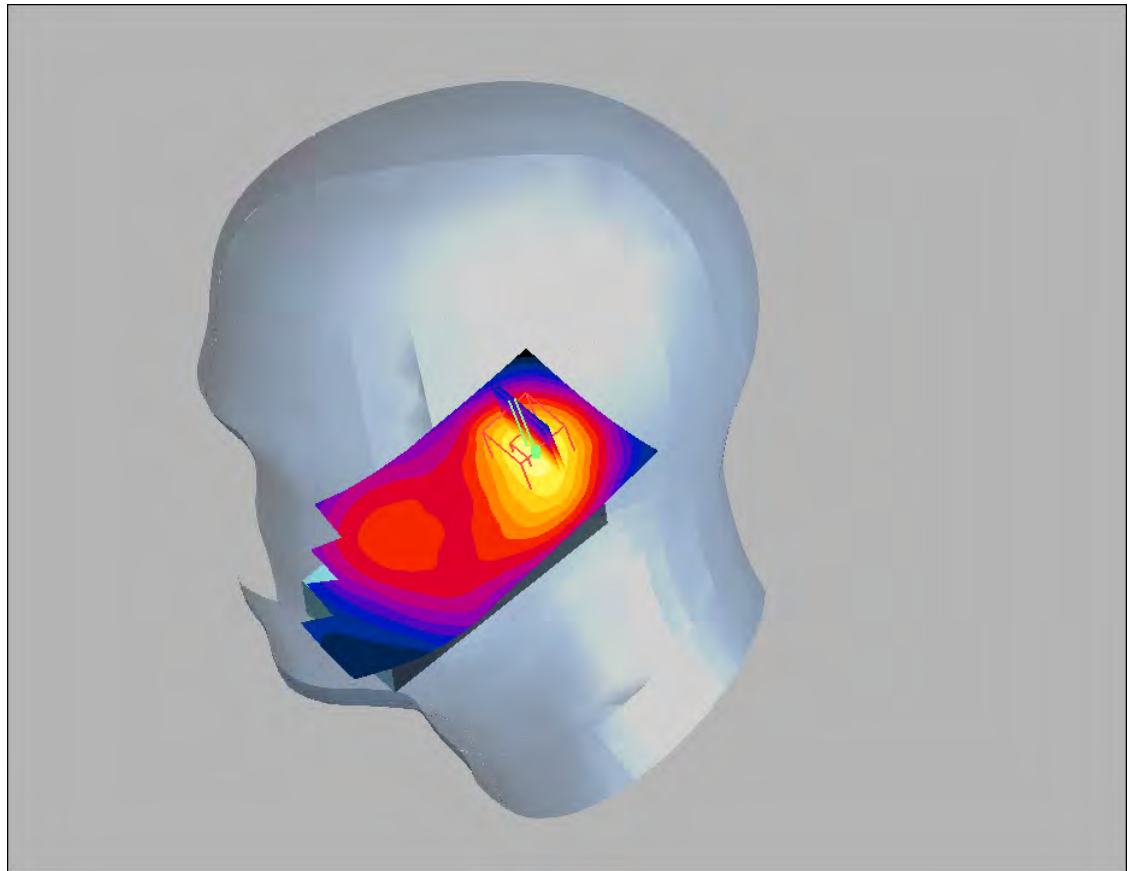
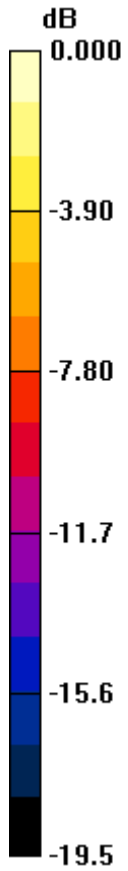
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.009 dB

Maximum value of SAR (interpolated) = 0.390 mW/g



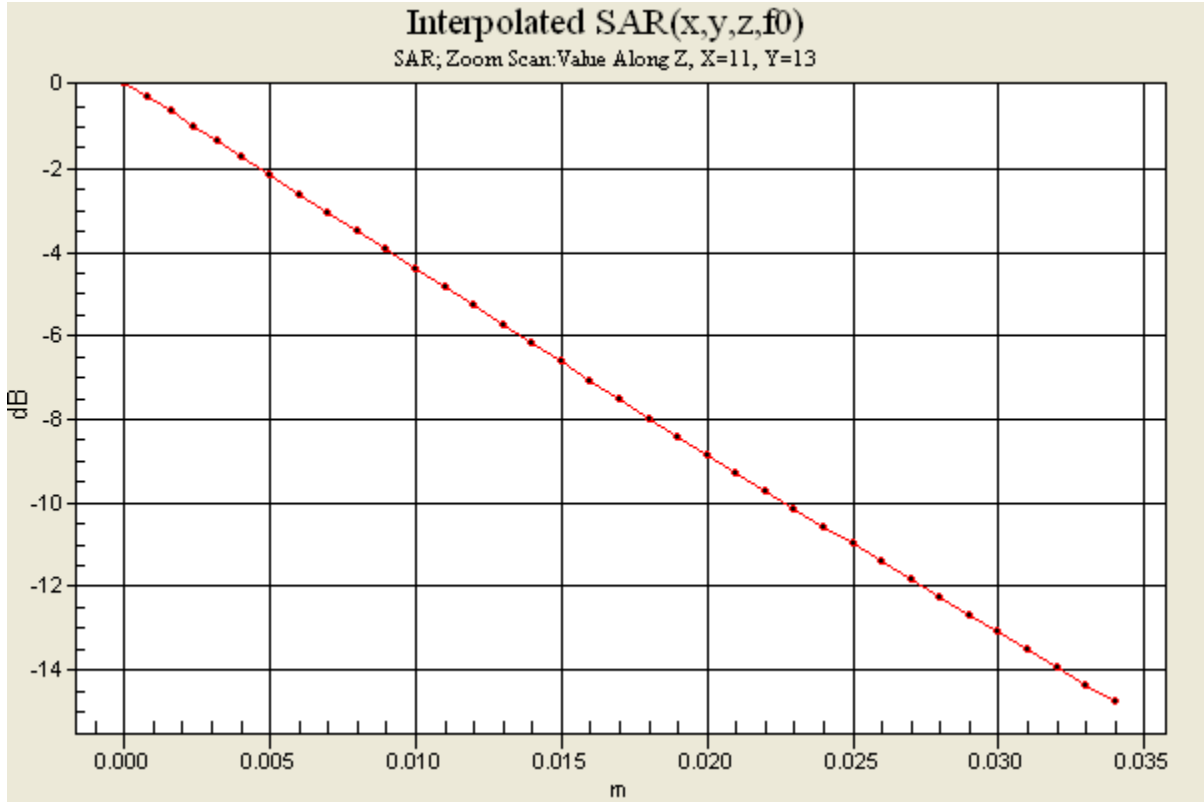
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.390mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 6/24/2009 8:08:30 AM

File Name: [24June09_Aino_GSM1900_25ZM_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 42 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.509 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.99 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.945 W/kg

SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.246 mW/g

Maximum value of SAR (measured) = 0.529 mW/g

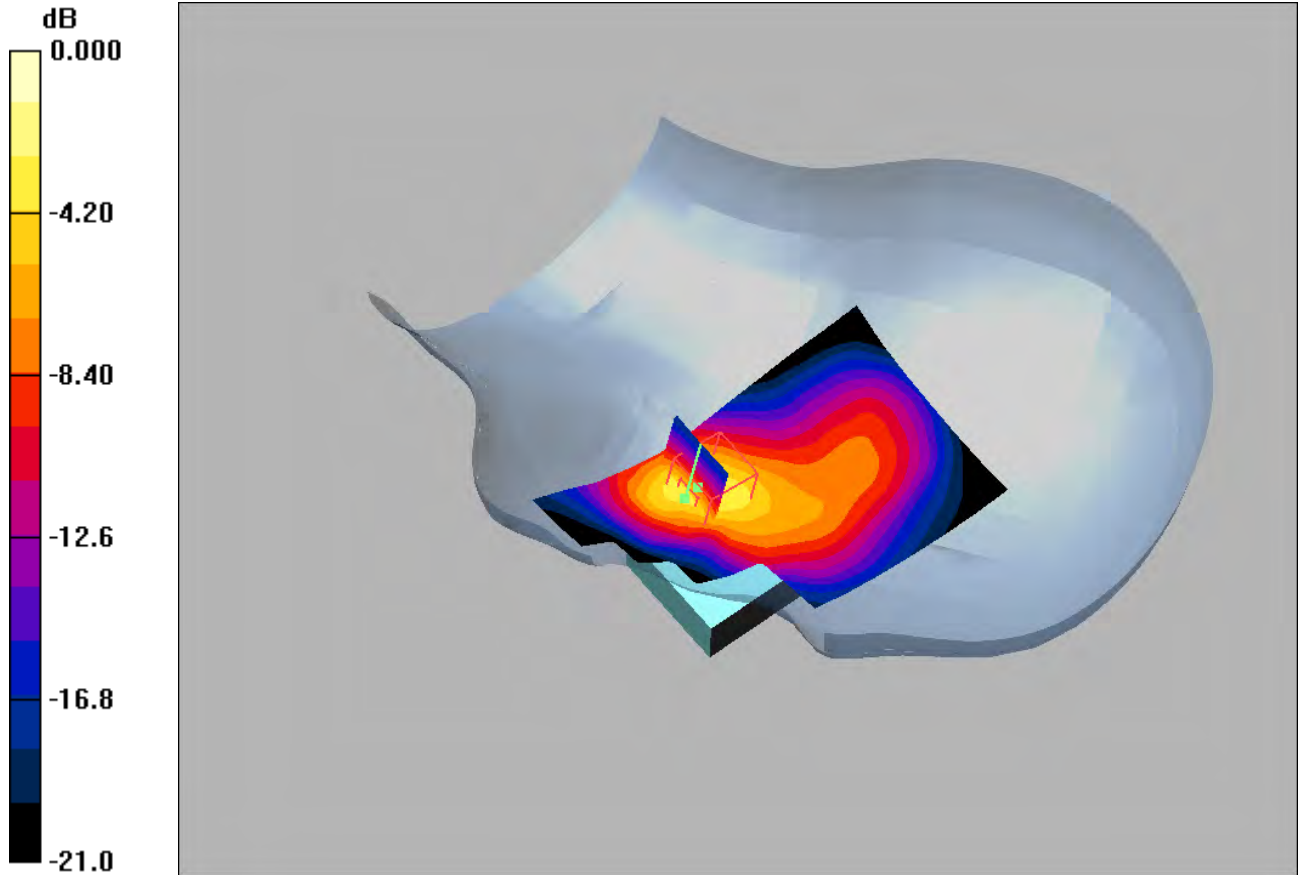
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.99 V/m; Power Drift = -0.018 dB

Maximum value of SAR (interpolated) = 0.945 mW/g



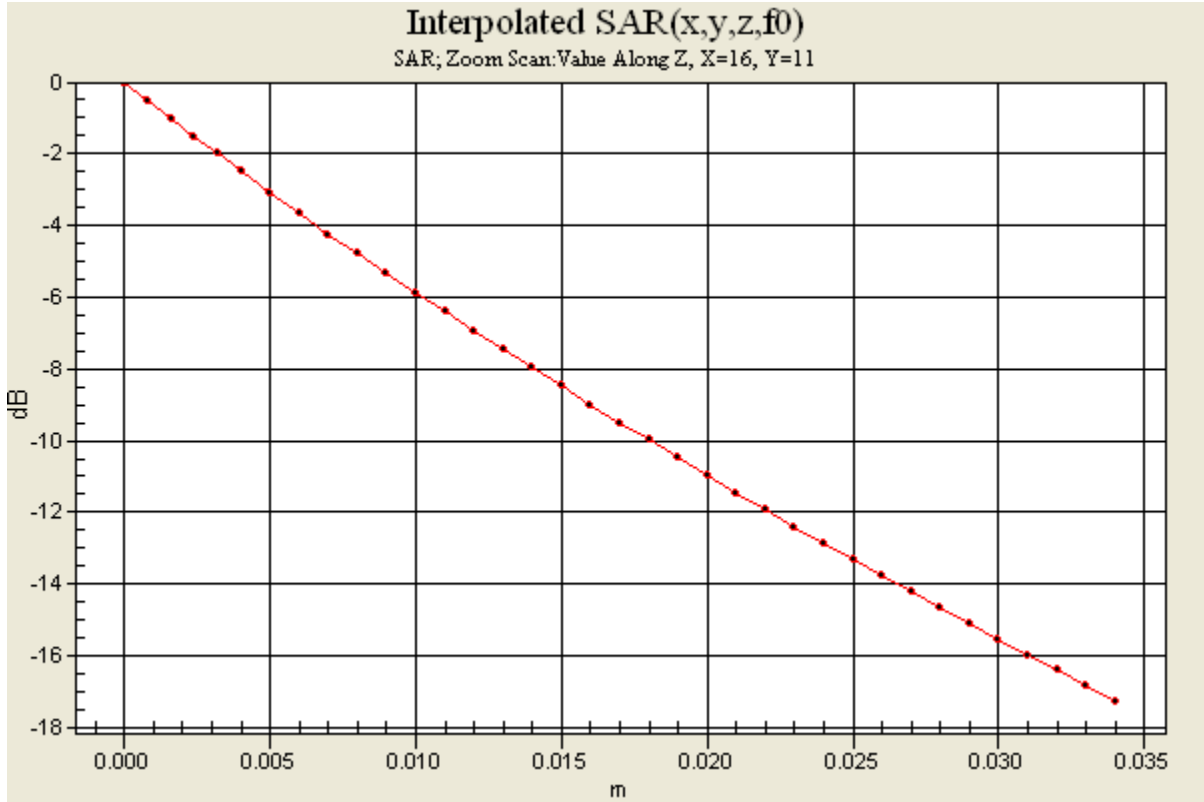
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.945mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 6/24/2009 9:17:33 AM

File Name: [24June09_Aino_GSM1900_25ZM_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 42 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.252 mW/g

High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.1 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.357 W/kg

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.135 mW/g

Maximum value of SAR (measured) = 0.242 mW/g

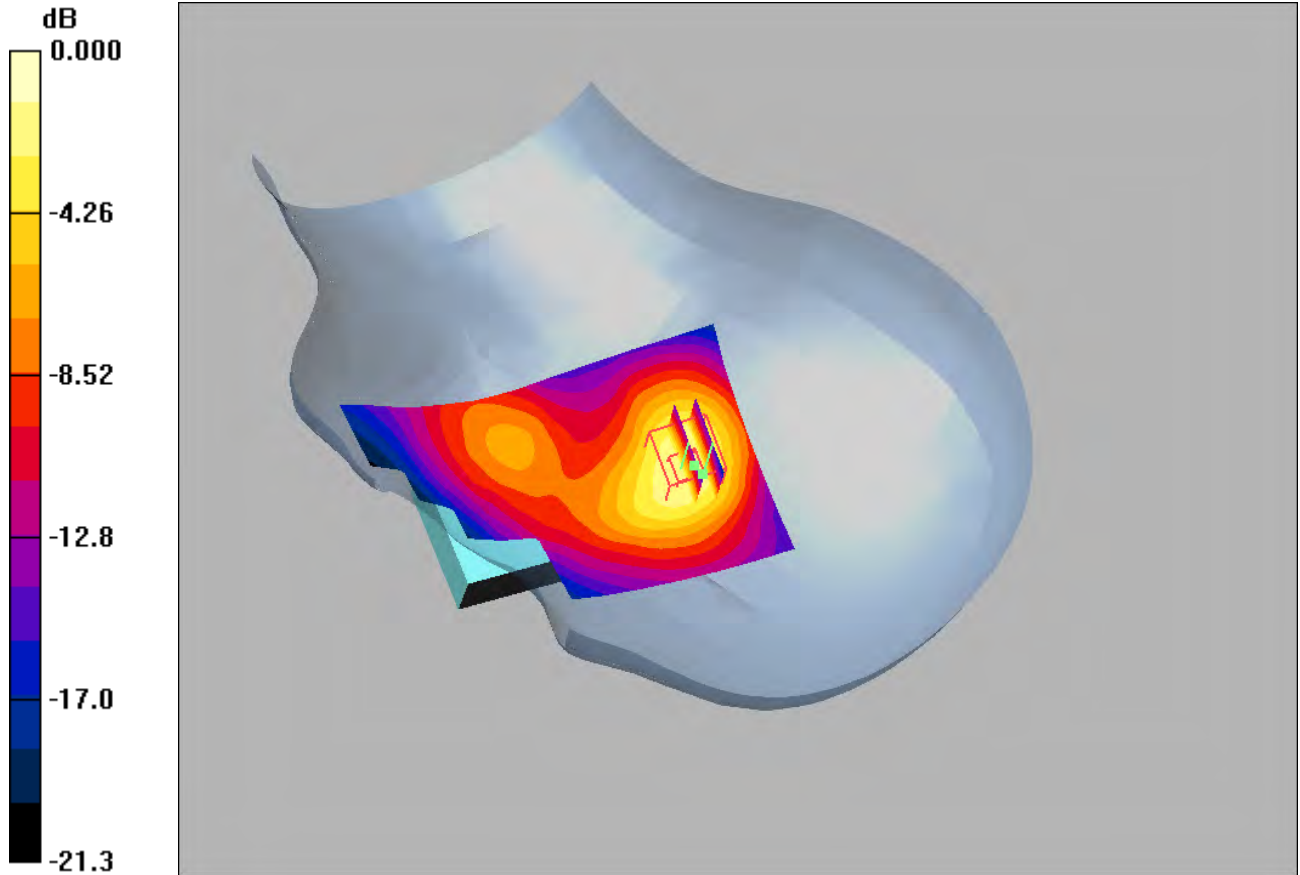
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.1 V/m; Power Drift = -0.014 dB

Maximum value of SAR (interpolated) = 0.357 mW/g



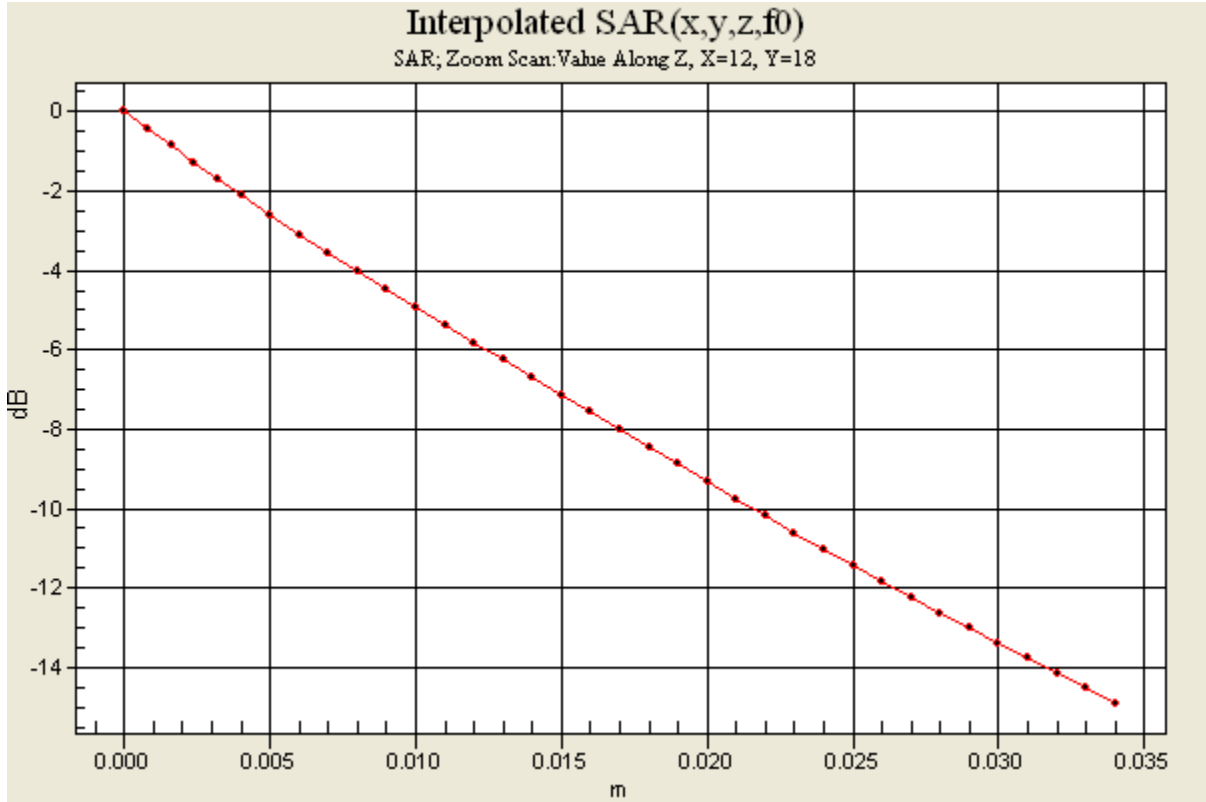
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.357mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 6/25/2009 12:38:53 PM

File Name: [25June09_Aino_B2WCDMA_25ZK_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 42.1 % Ambient Temp - 23.3 C Simulant Temp - 23.4 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Middle channel cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.564 mW/g

Middle channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = 0.060 dB

Peak SAR (extrapolated) = 0.787 W/kg

SAR(1 g) = 0.520 mW/g; SAR(10 g) = 0.320 mW/g

Maximum value of SAR (measured) = 0.564 mW/g

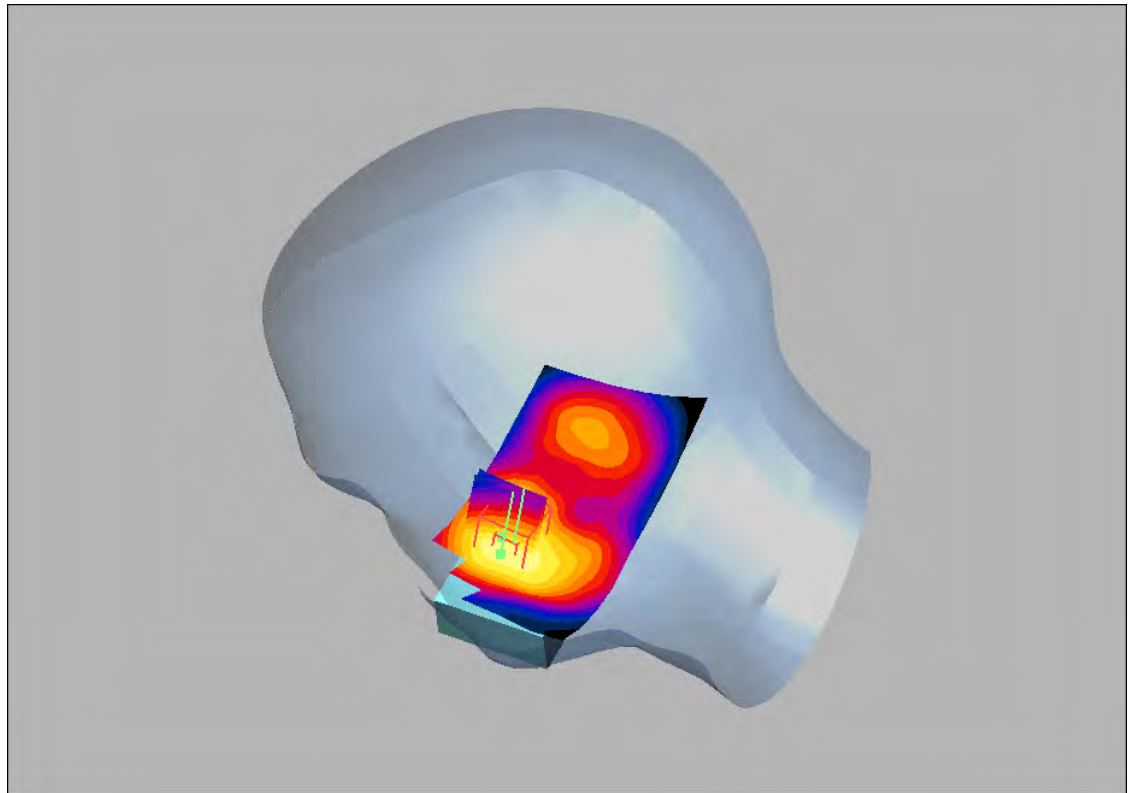
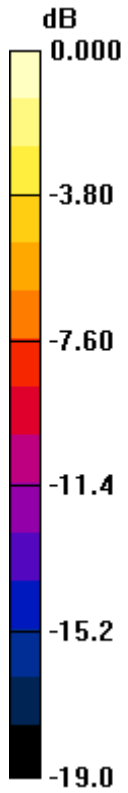
Middle channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = 0.060 dB

Maximum value of SAR (interpolated) = 0.787 mW/g



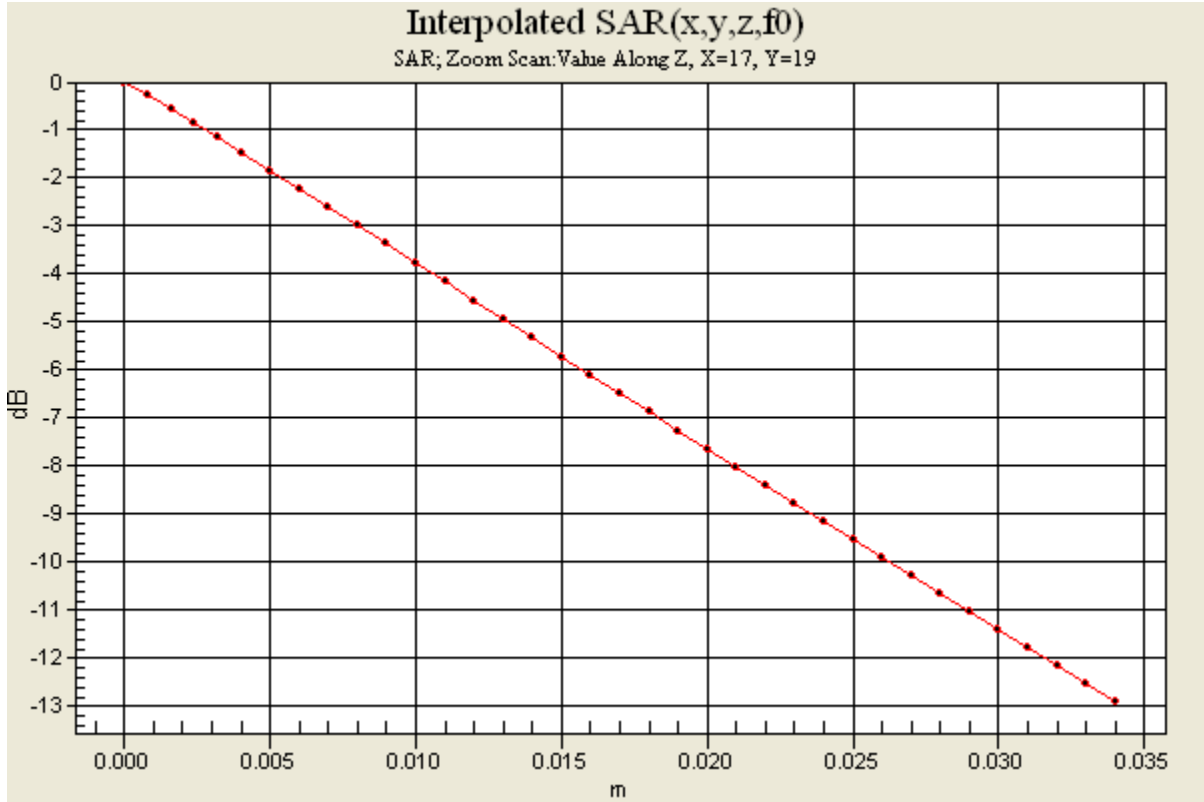
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.787mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 6/25/2009 1:24:21 PM

File Name: [25June09_Aino_B2WCDMA_25ZK_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 42.1 % Ambient Temp - 23.3 C Simulant Temp - 23.4 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.322 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.0 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 0.478 W/kg

SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.172 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.322 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

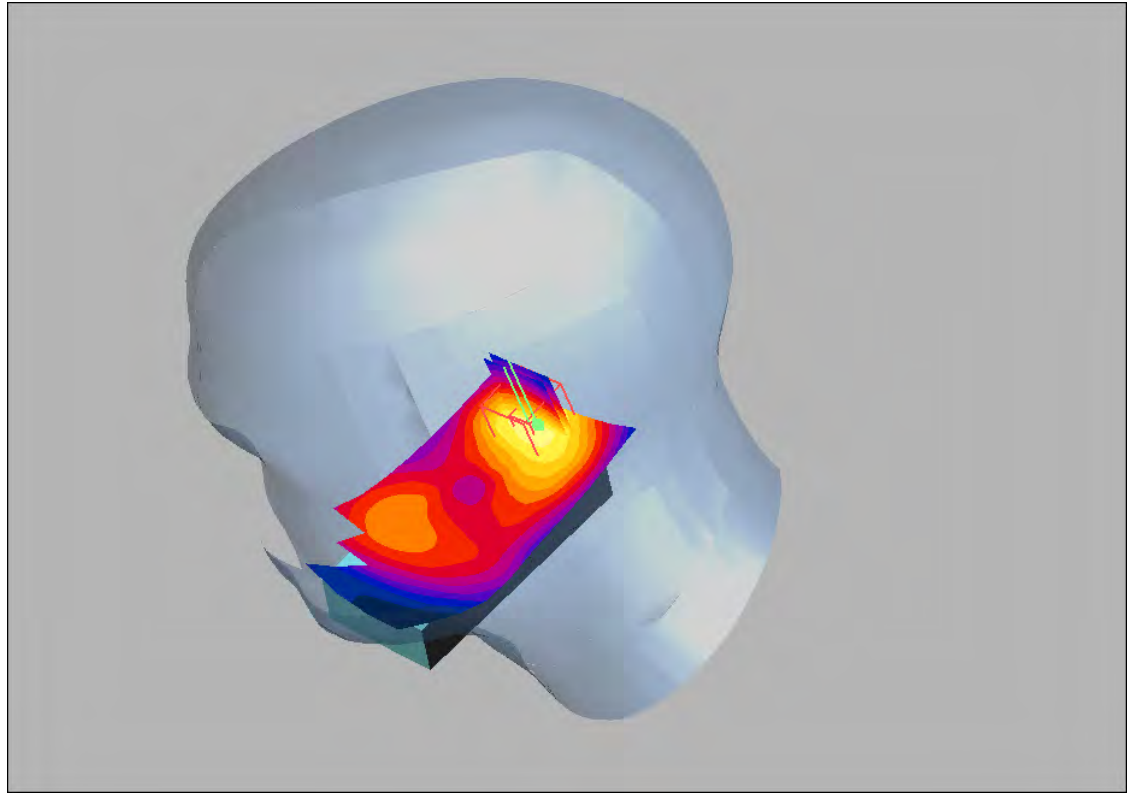
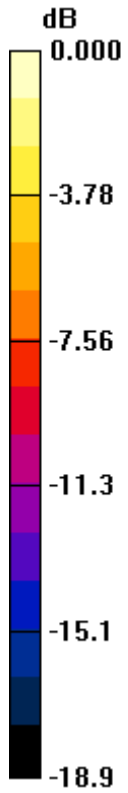
Reference Value = 16.0 V/m; Power Drift = -0.074 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.478 mW/g



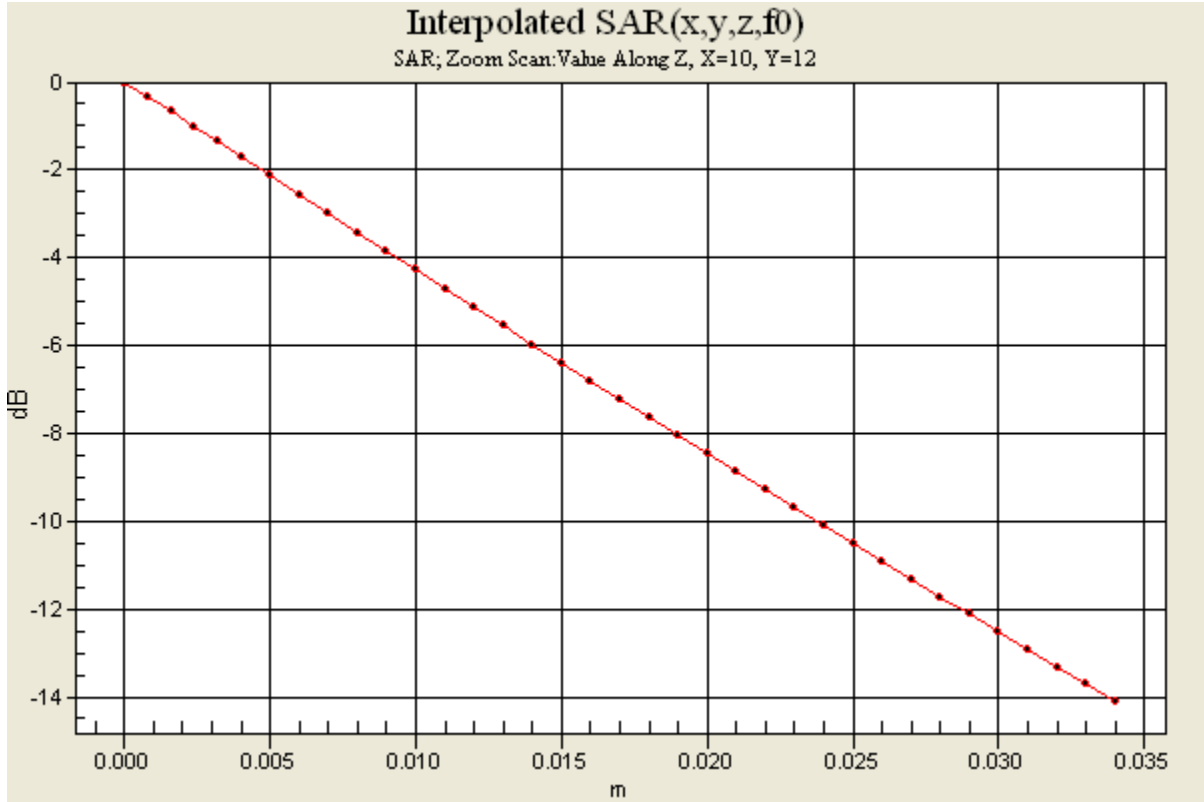
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.478mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 6/25/2009 9:25:49 AM

File Name: [25June09_Aino_B2WCDMA_25ZK_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 42.1 % Ambient Temp - 23.3 C Simulant Temp - 23.4 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.497 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.85 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.874 W/kg

SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.277 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.551 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

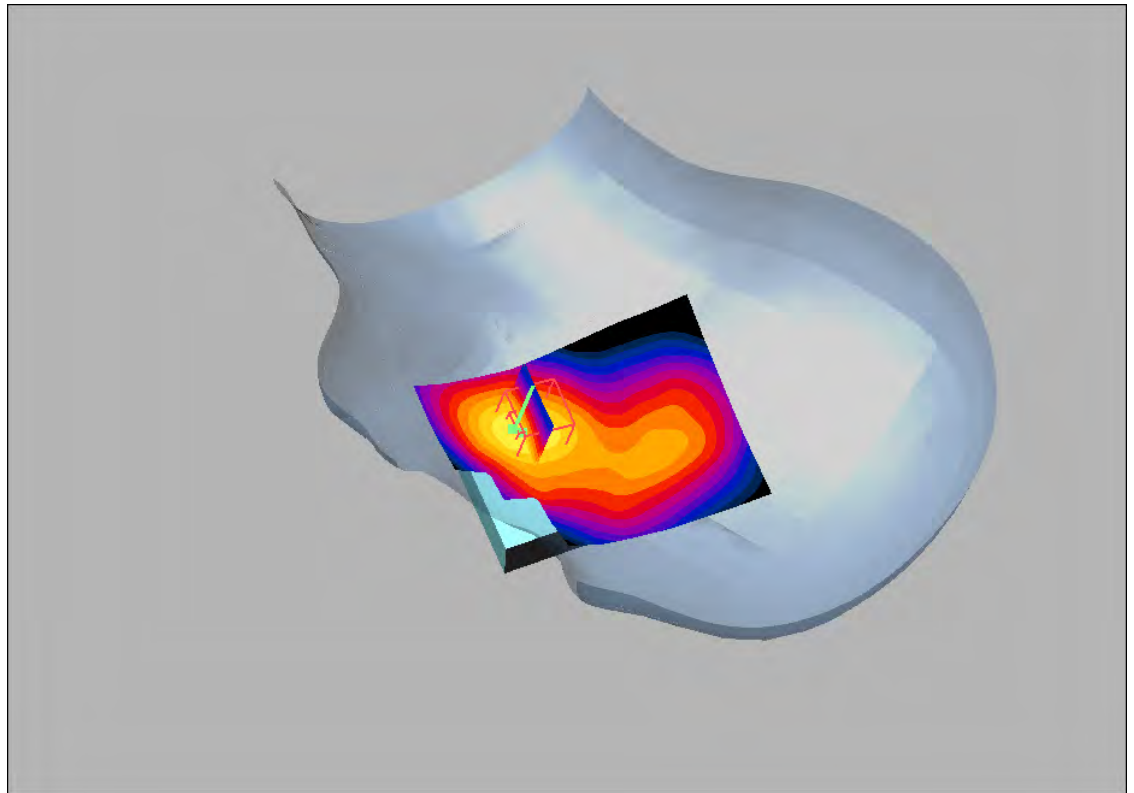
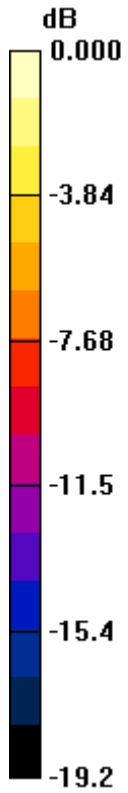
Reference Value = 9.85 V/m; Power Drift = -0.033 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.874 mW/g



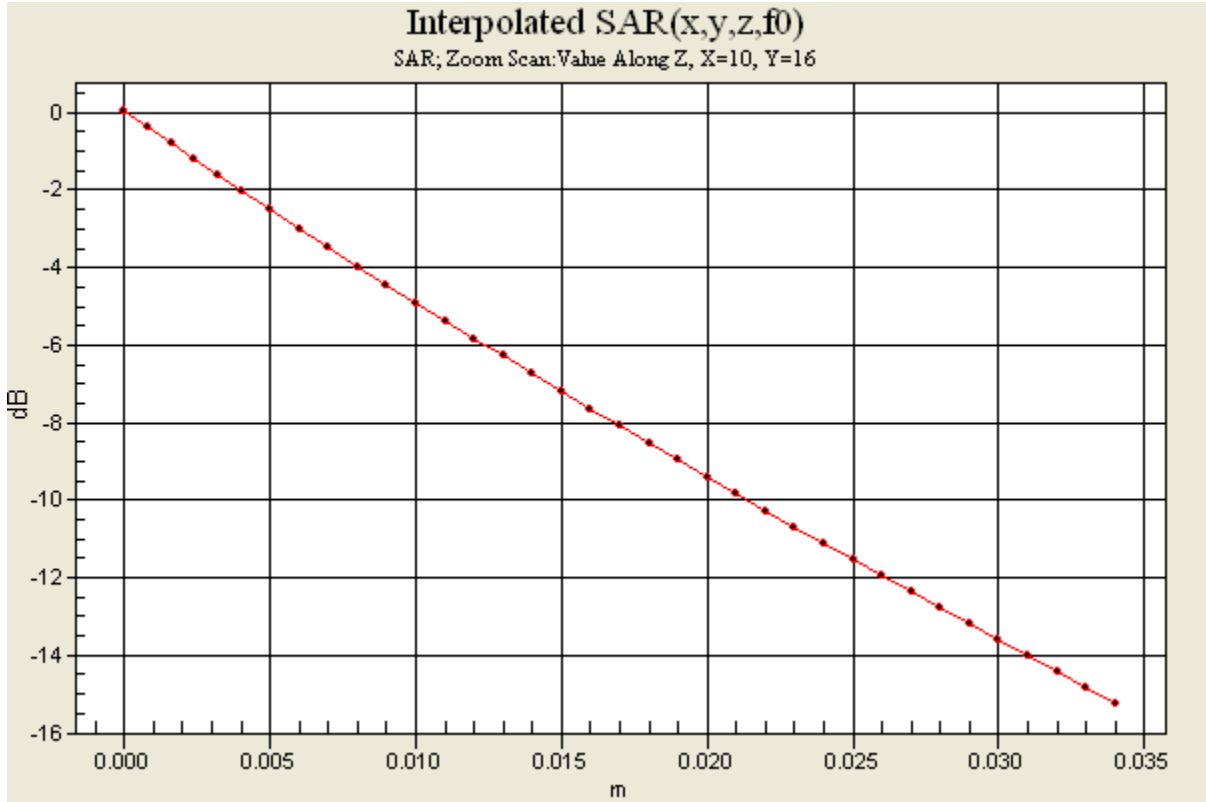
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.874mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 6/25/2009 11:07:43 AM

File Name: [25June09_Aino_B2WCDMA_25ZK_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 42.1 % Ambient Temp - 23.3 C Simulant Temp - 23.4 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.318 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.270 mW/g; SAR(10 g) = 0.170 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.293 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

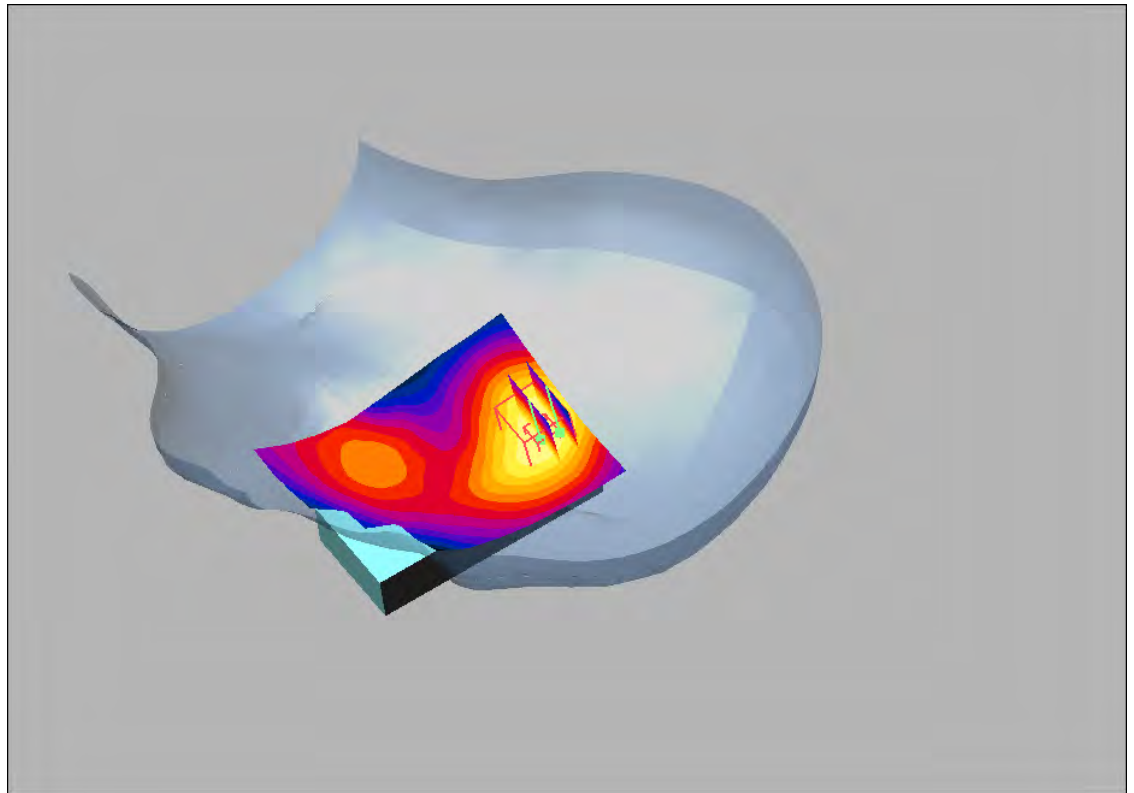
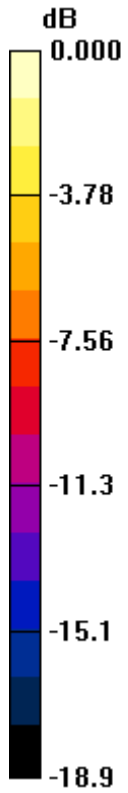
Reference Value = 14.8 V/m; Power Drift = -0.063 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.424 mW/g



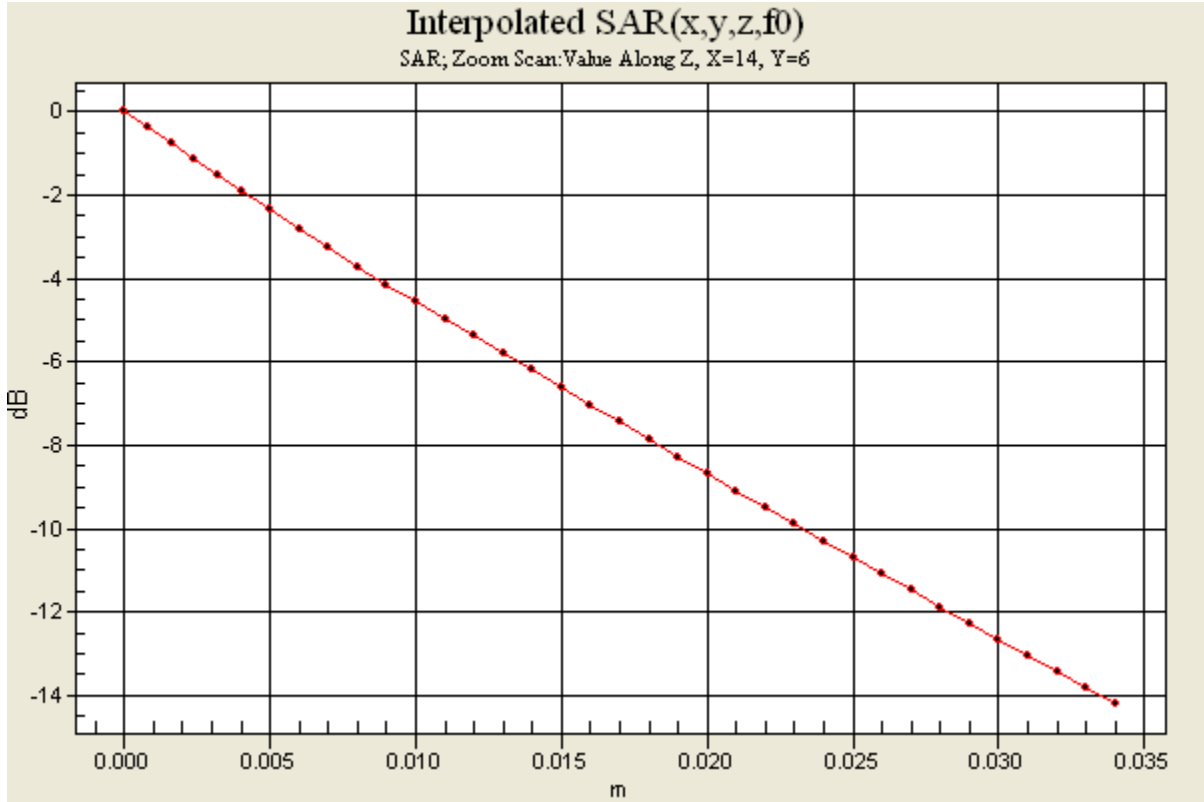
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	



0 dB = 0.424mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 7/8/2009 11:26:08 AM

File Name: [08July09_Aino_B5WCDMA_25YB_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 826.6$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 39.5 % Ambient Temp: 24.1 C Simulant Temp: 23.9 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.318 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.61 V/m; Power Drift = -0.082 dB

Peak SAR (extrapolated) = 0.369 W/kg

SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.224 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.316 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

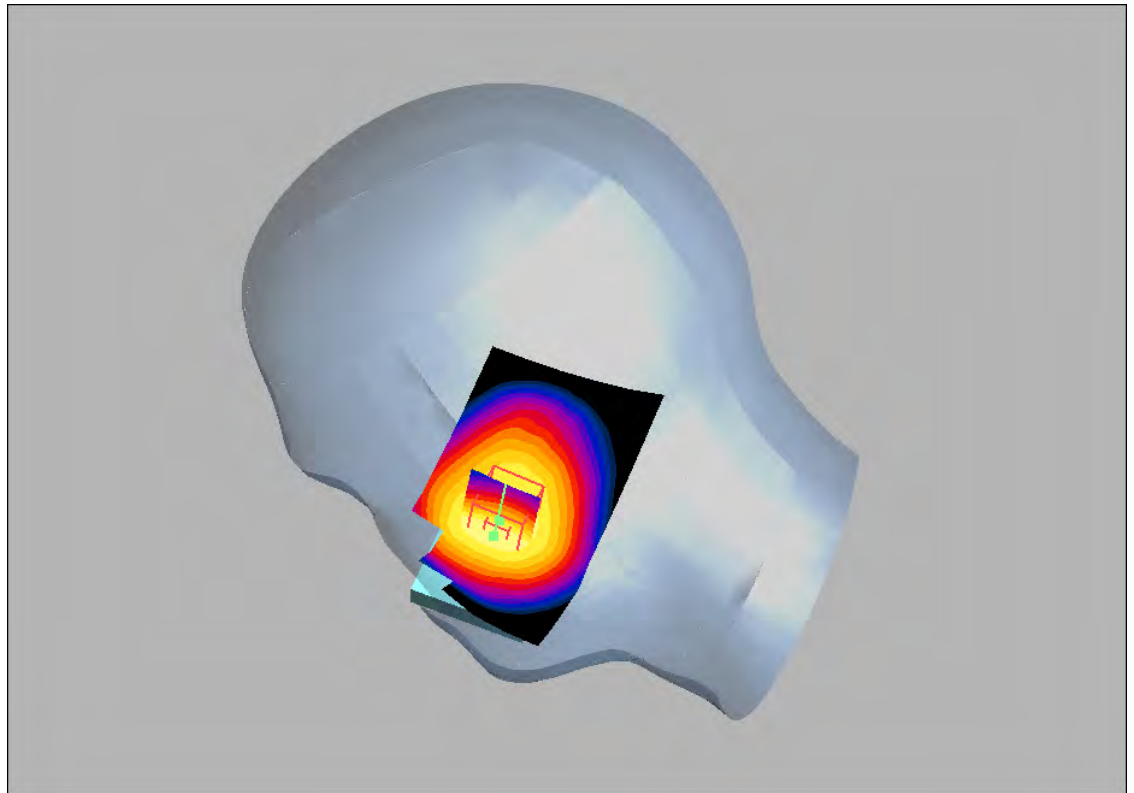
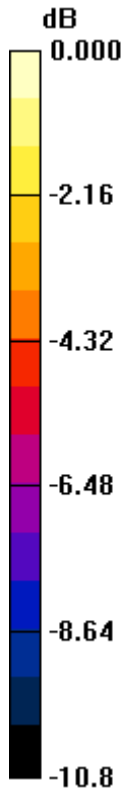
Reference Value = 8.61 V/m; Power Drift = -0.082 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.369 mW/g



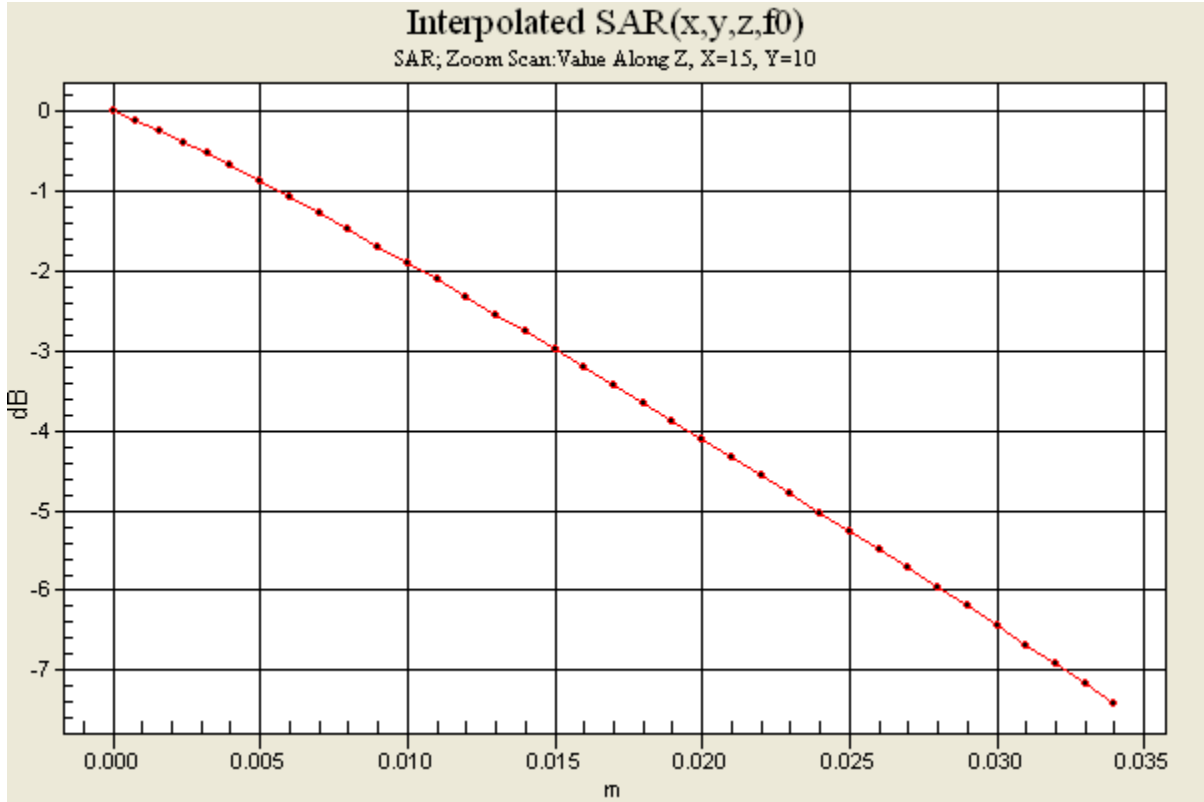
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0 dB = 0.369mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 7/8/2009 1:20:30 PM

File Name: [08July09_Aino_B5WCDMA_25YB_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 826.6$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 39.5 % Ambient Temp: 24.1 C Simulant Temp: 23.9 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.260 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.7 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.409 W/kg

SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.148 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.237 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

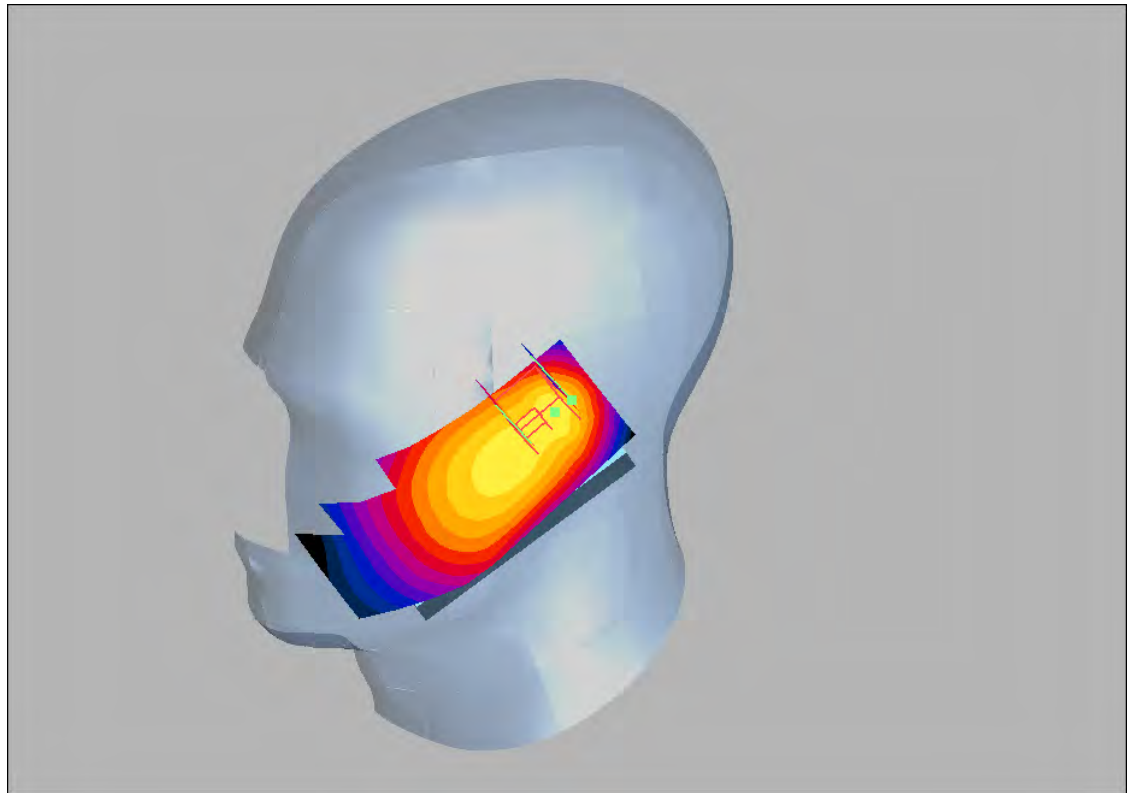
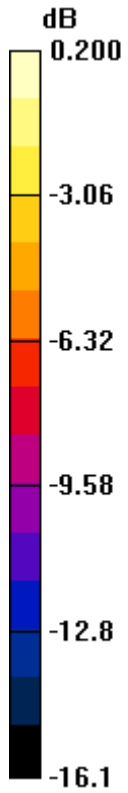
Reference Value = 15.7 V/m; Power Drift = -0.049 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.409 mW/g



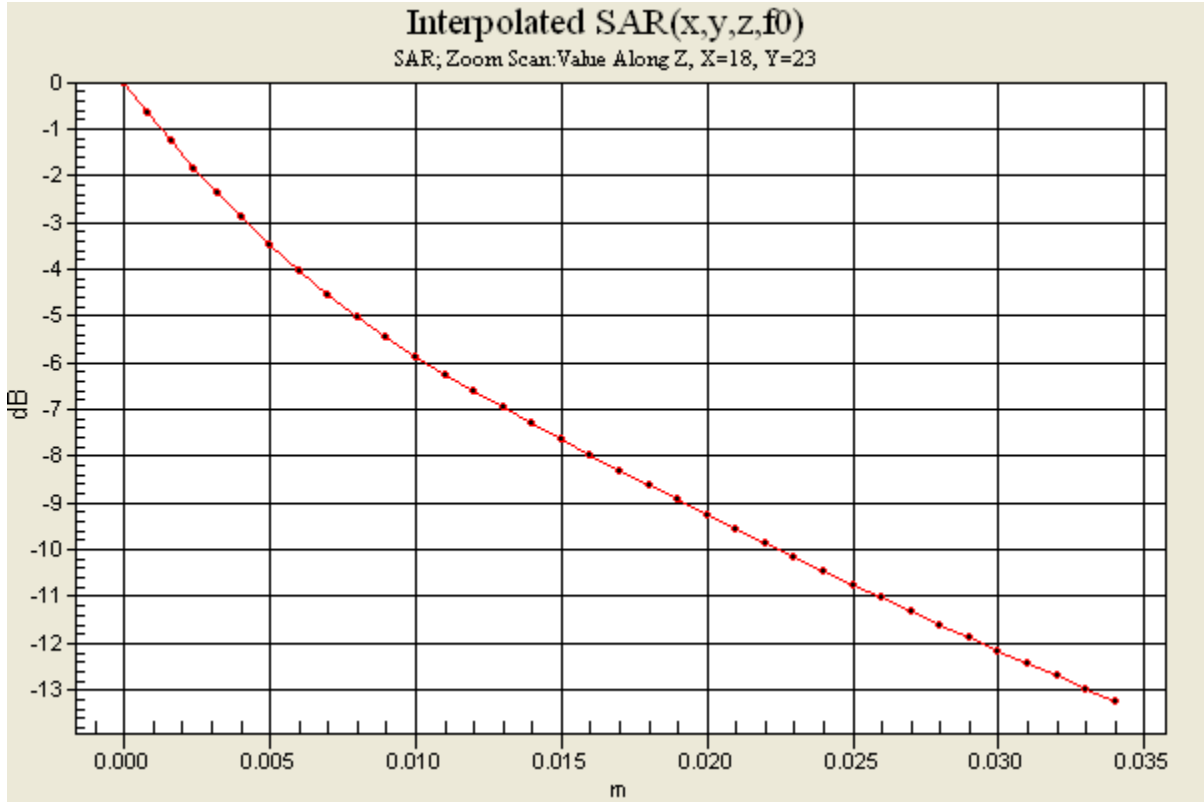
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.409mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 7/8/2009 8:11:42 AM

File Name: [08July09_Aino_B5WCDMA_25YB_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 826.6 \text{ MHz}$; $\sigma = 0.887 \text{ mho/m}$; $\epsilon_r = 42$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.4 % Ambient Temp: 24.3 C Simulant Temp: 24 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x91x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.352 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.66 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.476 W/kg

SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.227 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.353 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

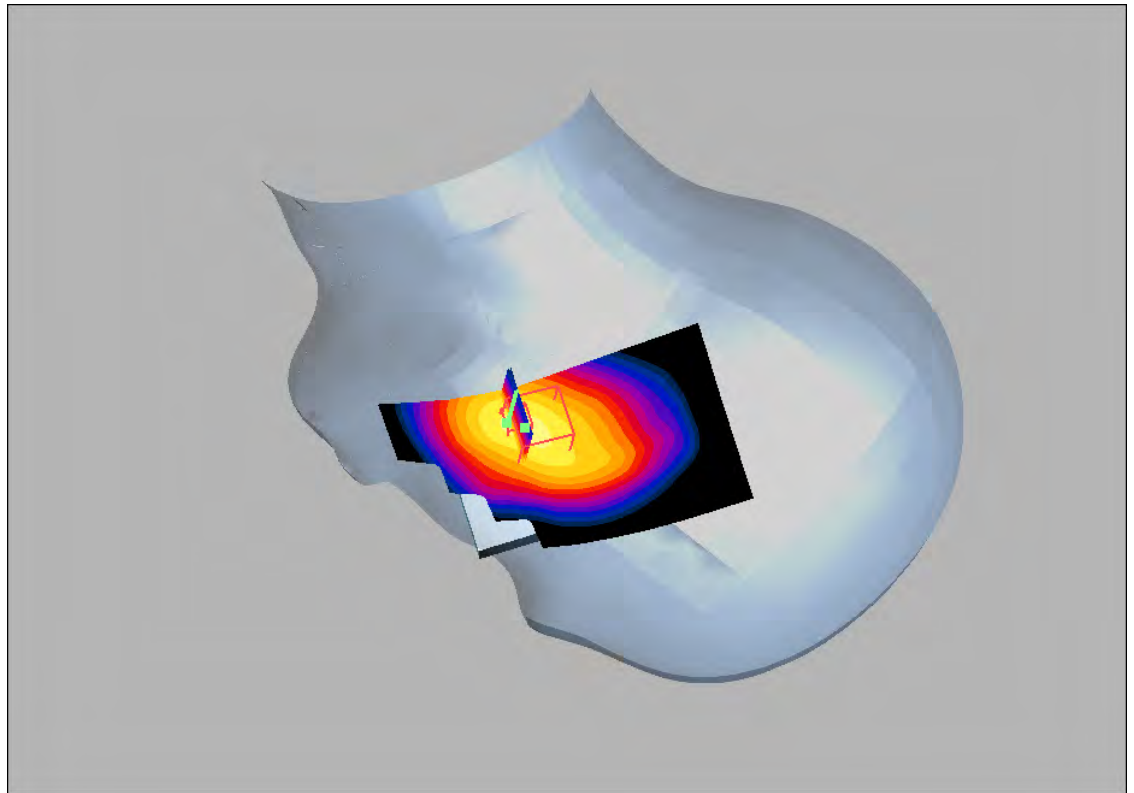
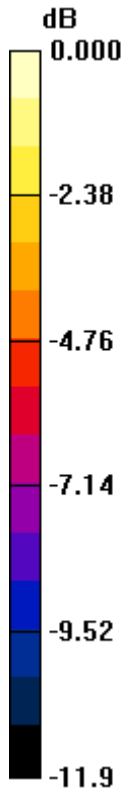
Reference Value = 7.66 V/m; Power Drift = -0.094 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.476 mW/g



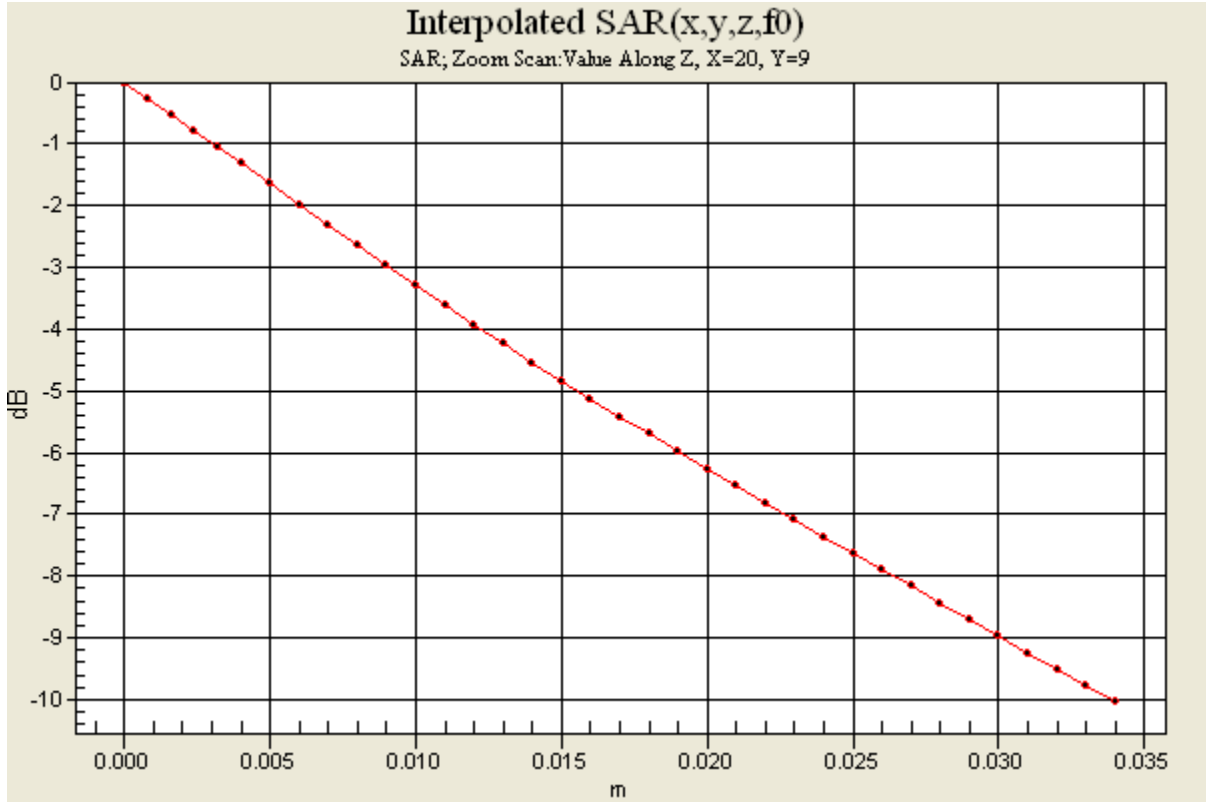
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.476mW/g



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Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 7/8/2009 9:47:13 AM

File Name: [08July09_Aino_B5WCDMA_25YB_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (Low Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 826.6$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.4 % Ambient Temp: 24.3 C Simulant Temp: 24 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.205 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.7 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.249 W/kg

SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.143 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.207 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

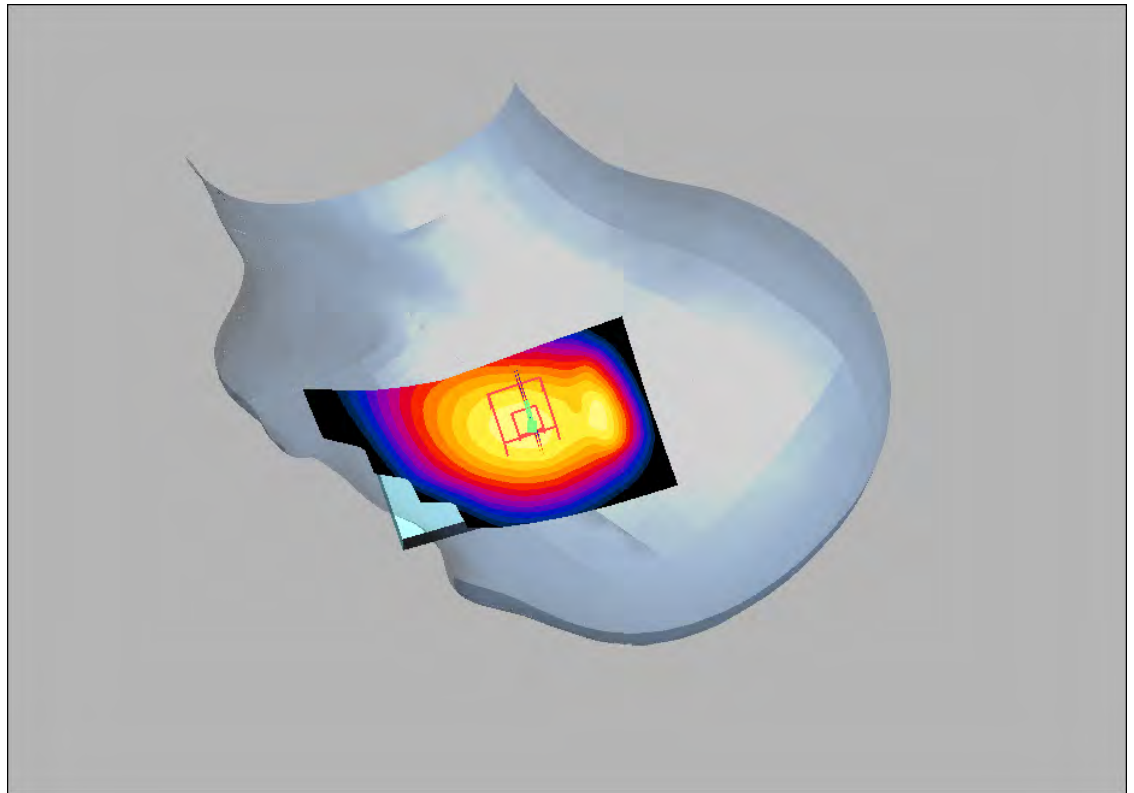
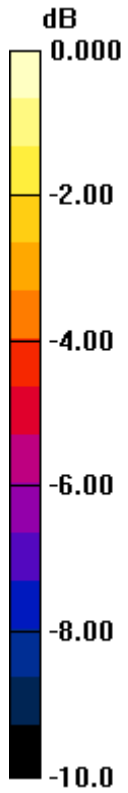
Reference Value = 13.7 V/m; Power Drift = -0.013 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.249 mW/g



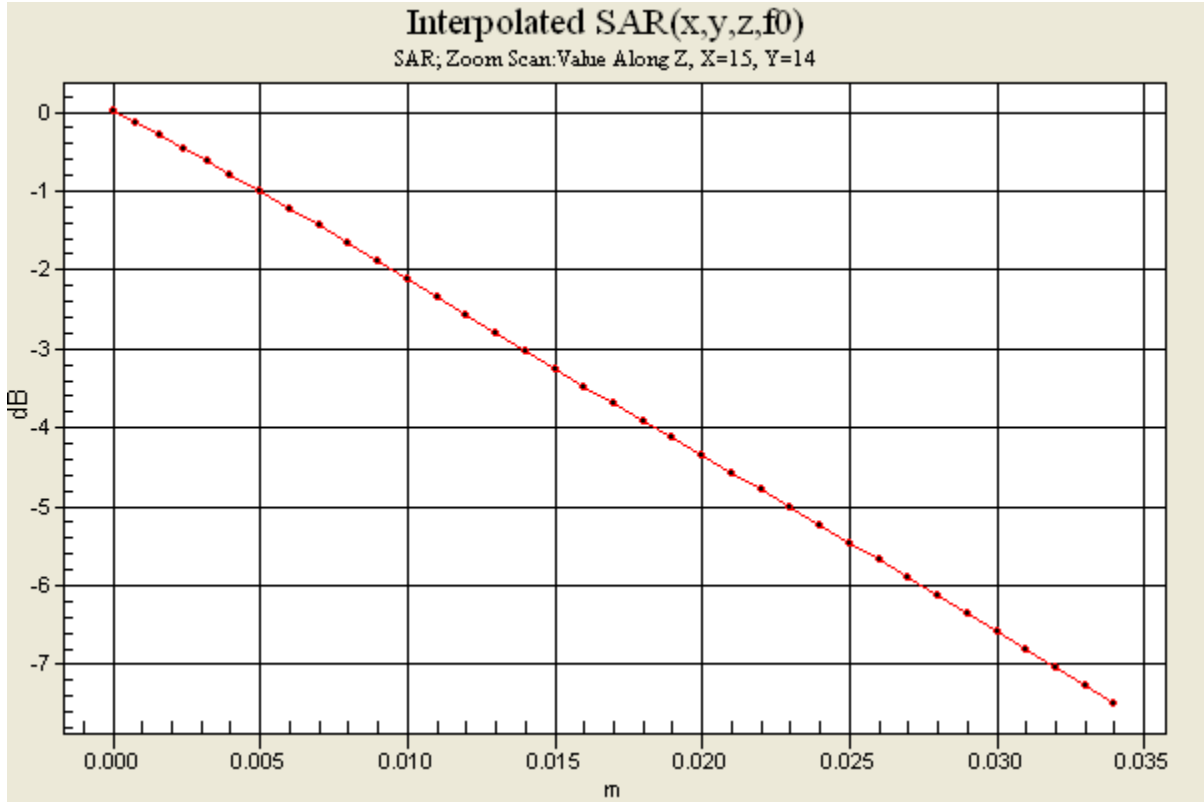
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0 dB = 0.249mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Appendix 2a

SAR distribution plots for Phantom Head Adjacent Use

Open Position



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800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 6/22/2009 1:15:27 PM

File Name: [22June09_Aino_GSM850_25YJ_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head)Phantom section: Right Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 41 % Ambient Temp - 24 C Simulant Temp - 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.892 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.839 mW/g; SAR(10 g) = 0.605 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.912 mW/g

High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

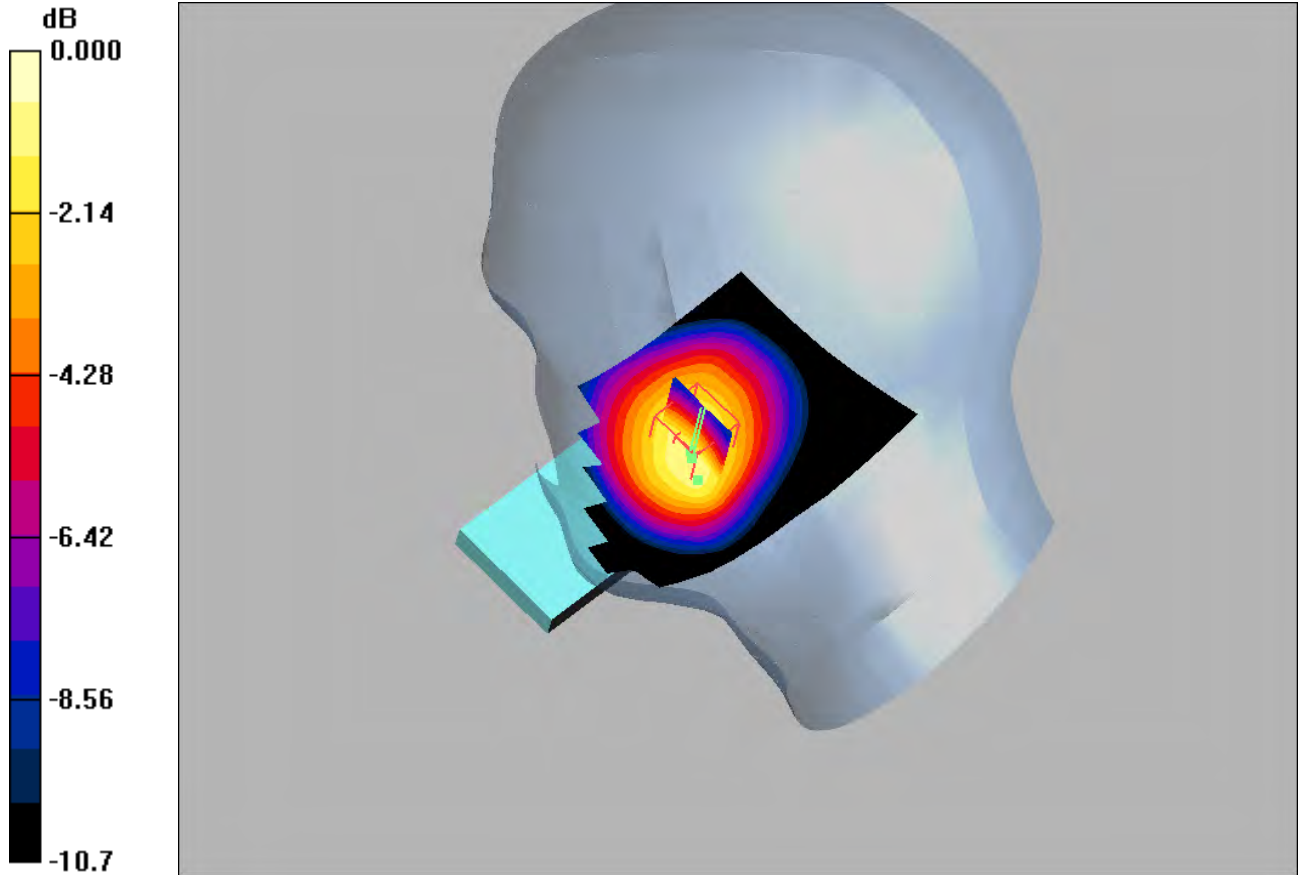
Reference Value = 12.0 V/m; Power Drift = -0.097 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.07 mW/g



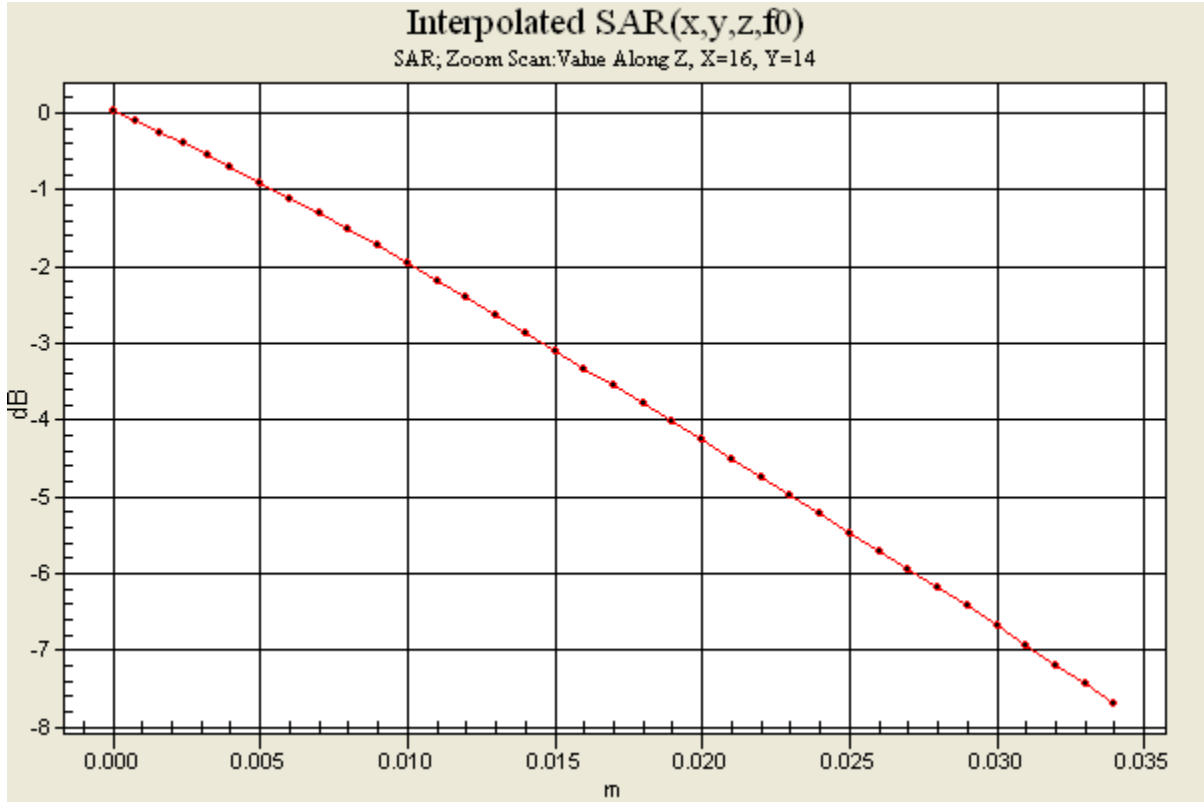
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 1.07mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

800 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 6/22/2009 1:57:48 PM

File Name: [22June09_Aino_GSM850_25YJ_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 836 \text{ MHz}$; $\sigma = 0.898 \text{ mho/m}$; $\epsilon_r = 41.5$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 41 % Ambient Temp - 24 C Simulant Temp - 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Middle channel tilt/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.479 mW/g

Middle channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.1 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 0.557 W/kg

SAR(1 g) = 0.439 mW/g; SAR(10 g) = 0.323 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.465 mW/g

Middle channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

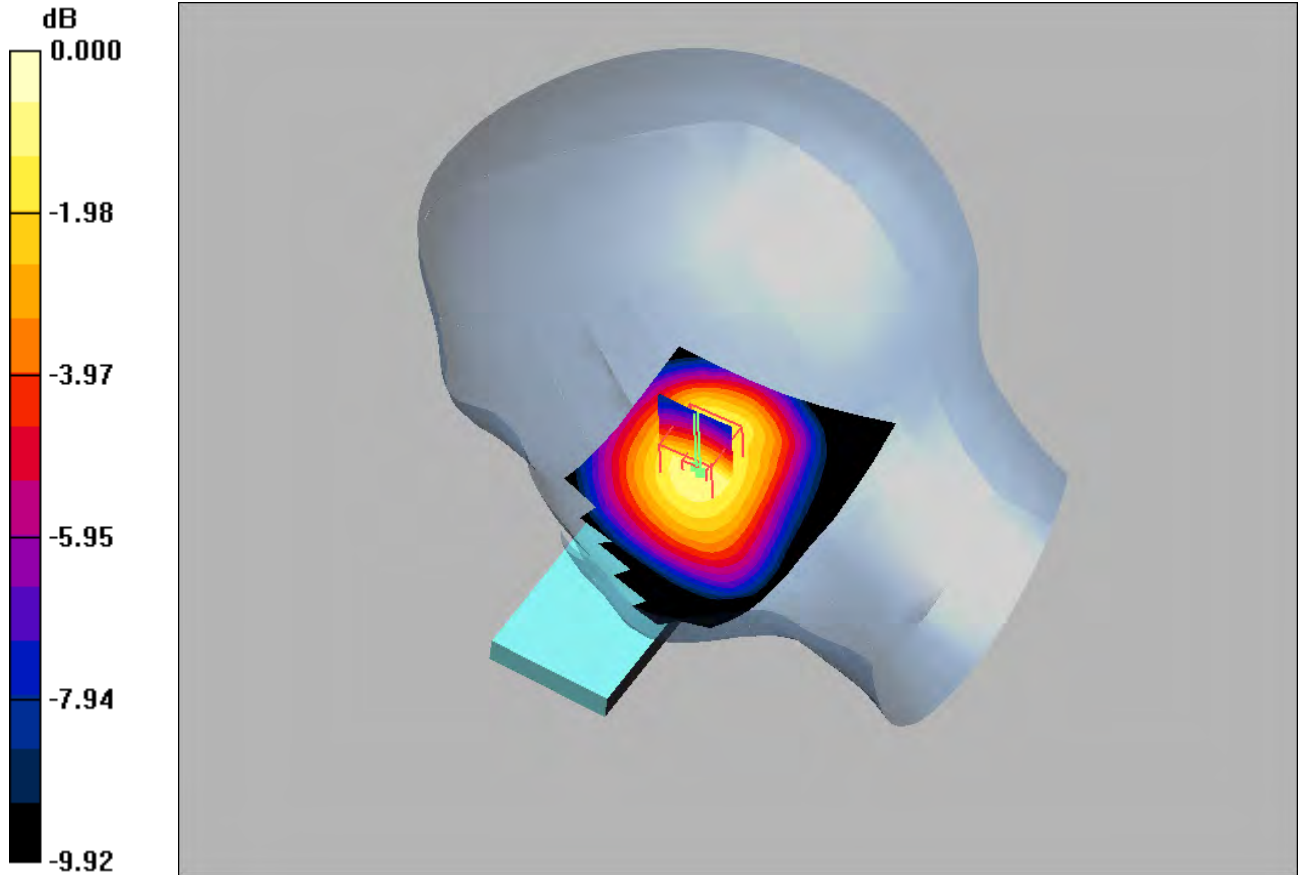
Reference Value = 20.1 V/m; Power Drift = -0.110 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.557 mW/g



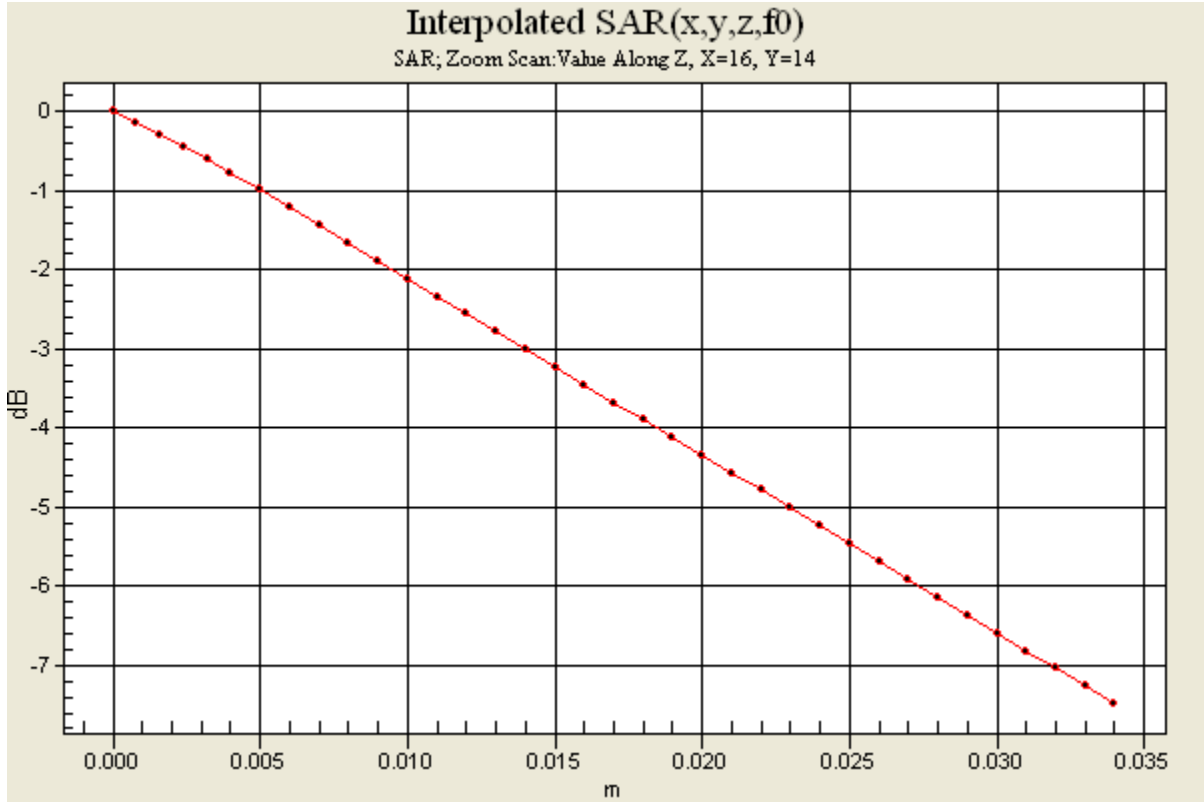
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.557mW/g



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800 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 6/22/2009 8:42:44 AM

File Name: [22June09 Aino GSM850 25YJ open LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 41 % Ambient Temp - 24 C Simulant Temp - 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.863 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 0.968 W/kg

SAR(1 g) = 0.784 mW/g; SAR(10 g) = 0.580 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.822 mW/g

High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

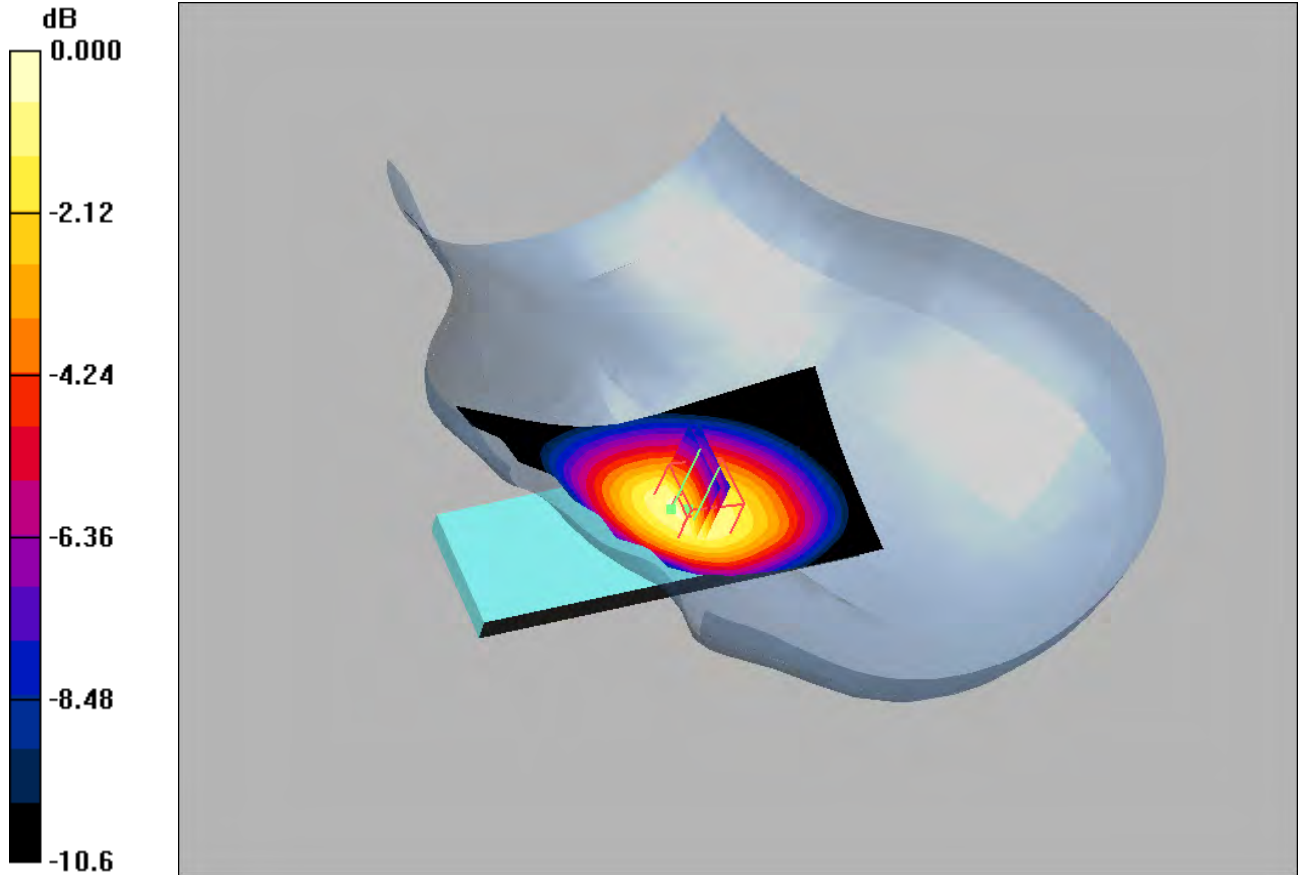
Reference Value = 12.7 V/m; Power Drift = -0.097 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.968 mW/g



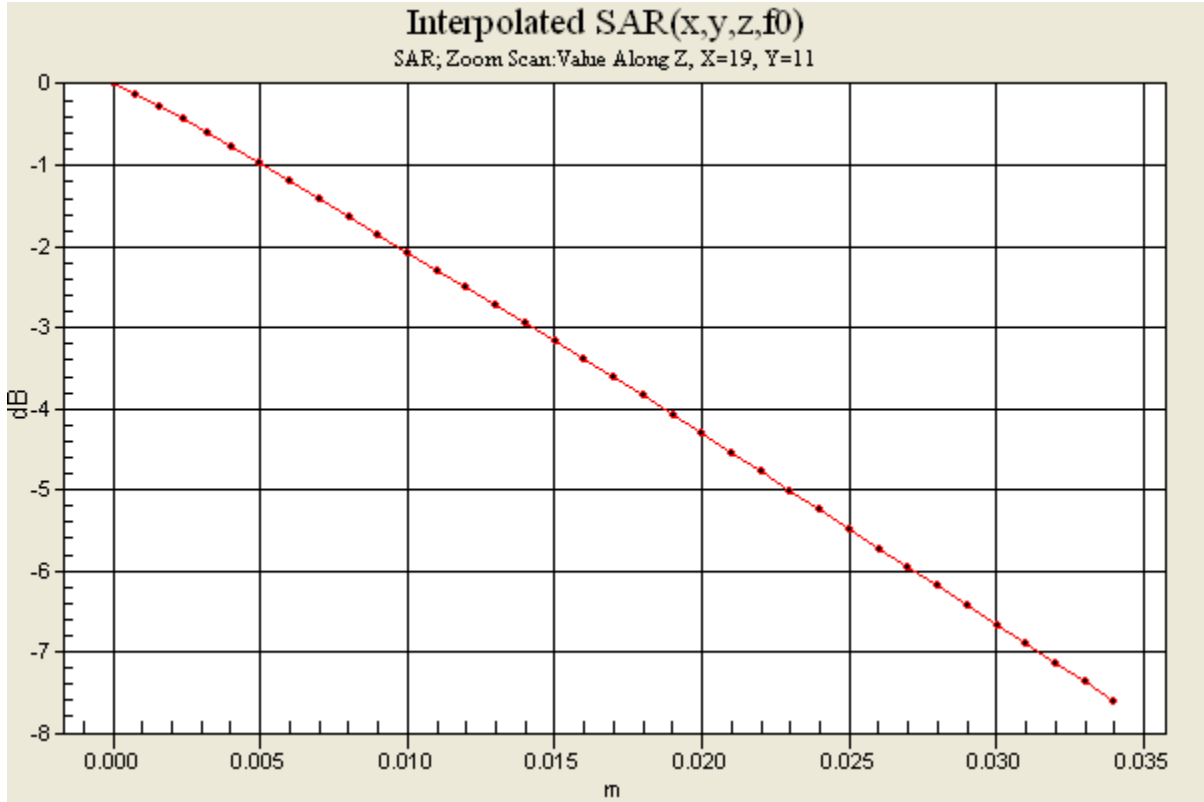
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.968mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

800 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 6/22/2009 10:09:27 AM

File Name: [22June09_Aino_GSM850_25YJ_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 836 \text{ MHz}$; $\sigma = 0.898 \text{ mho/m}$; $\epsilon_r = 41.5$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity - 41 % Ambient Temp - 24 C Simulant Temp - 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Middle channel tilt/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.445 mW/g

Middle channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.9 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.530 W/kg

SAR(1 g) = 0.419 mW/g; SAR(10 g) = 0.308 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.444 mW/g

Middle channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

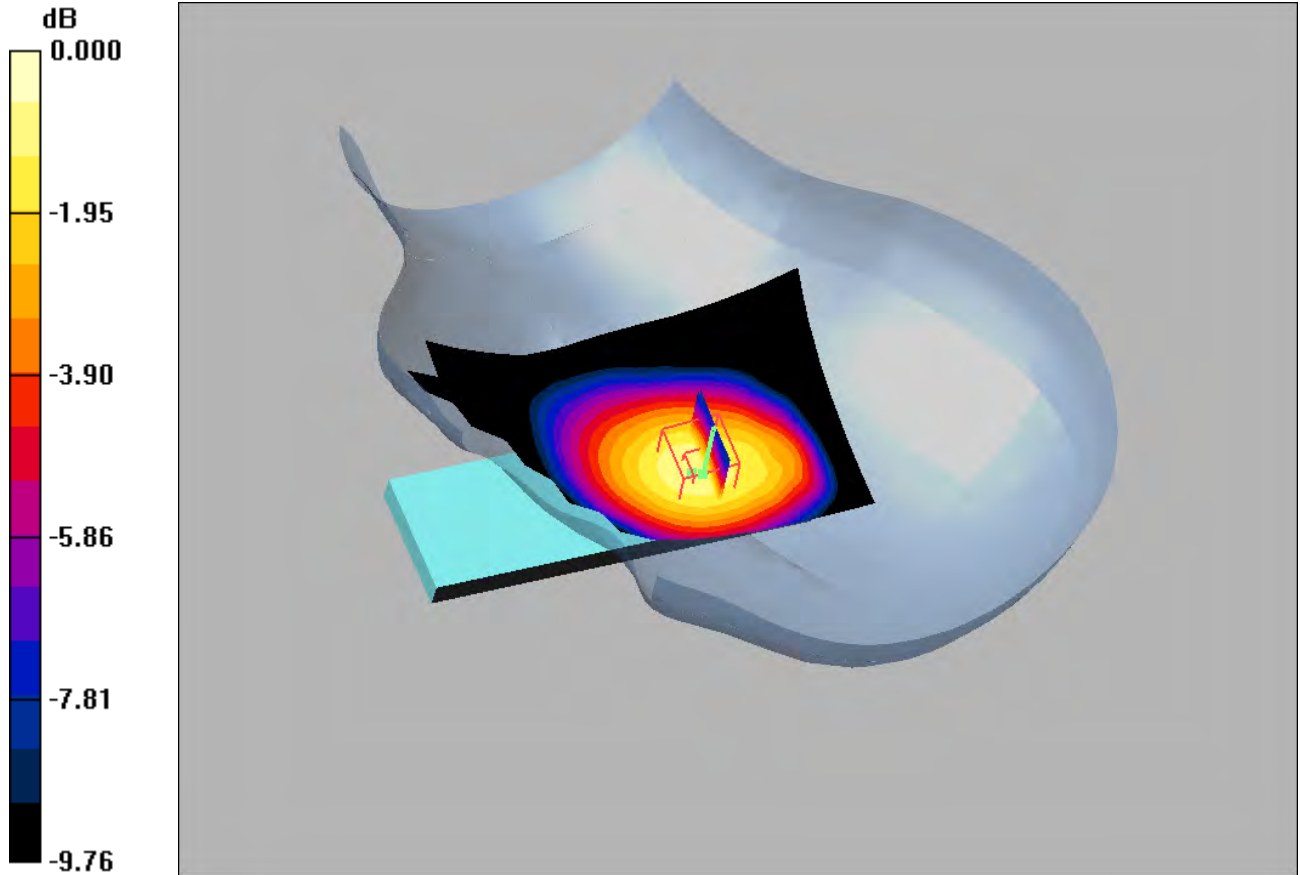
Reference Value = 18.9 V/m; Power Drift = -0.045 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.530 mW/g



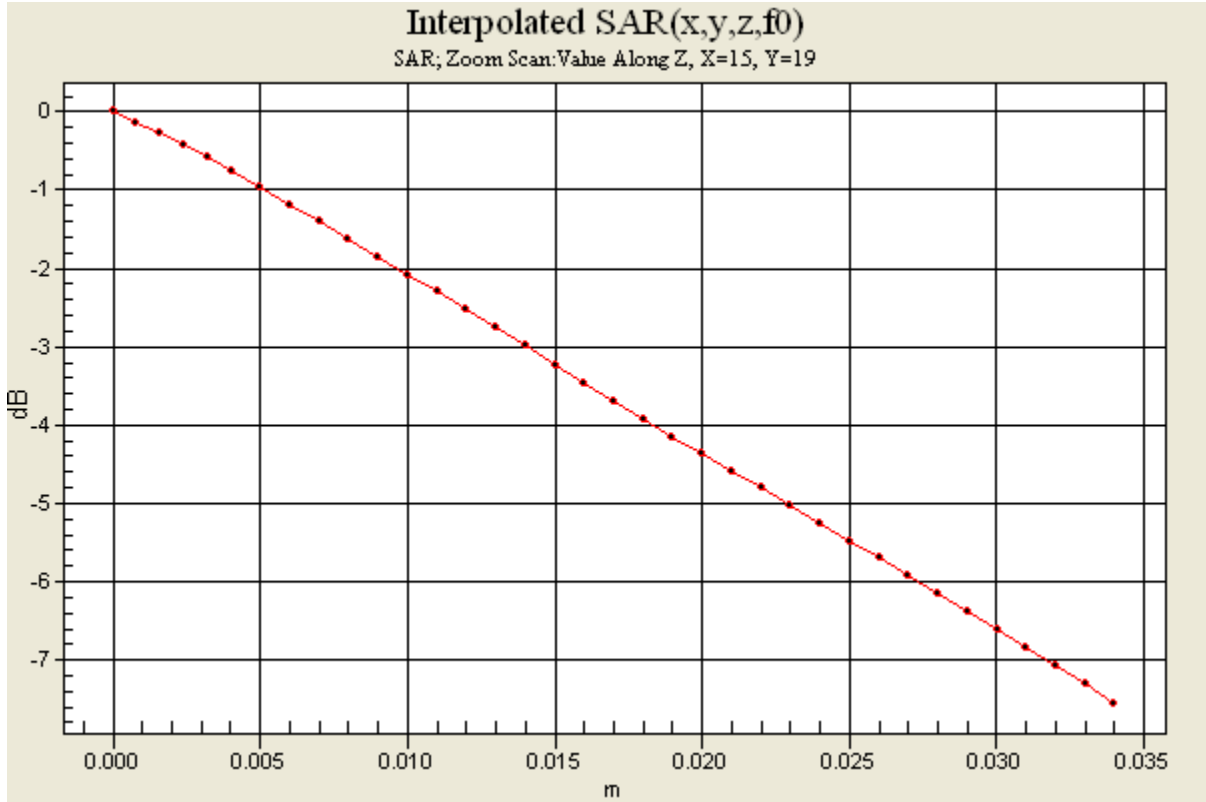
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.530mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

**1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: AINO with Standard Battery: BST-33, Right Cheek Position.**

Date/Time: 6/21/2009 10:29:14 AM

File Name: [21June09_Aino_GSM1900_25ZM_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 41.1 % Ambient Temp: 23.9 C Simulant Temp: 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.287 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.04 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.428 W/kg

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.272 mW/g

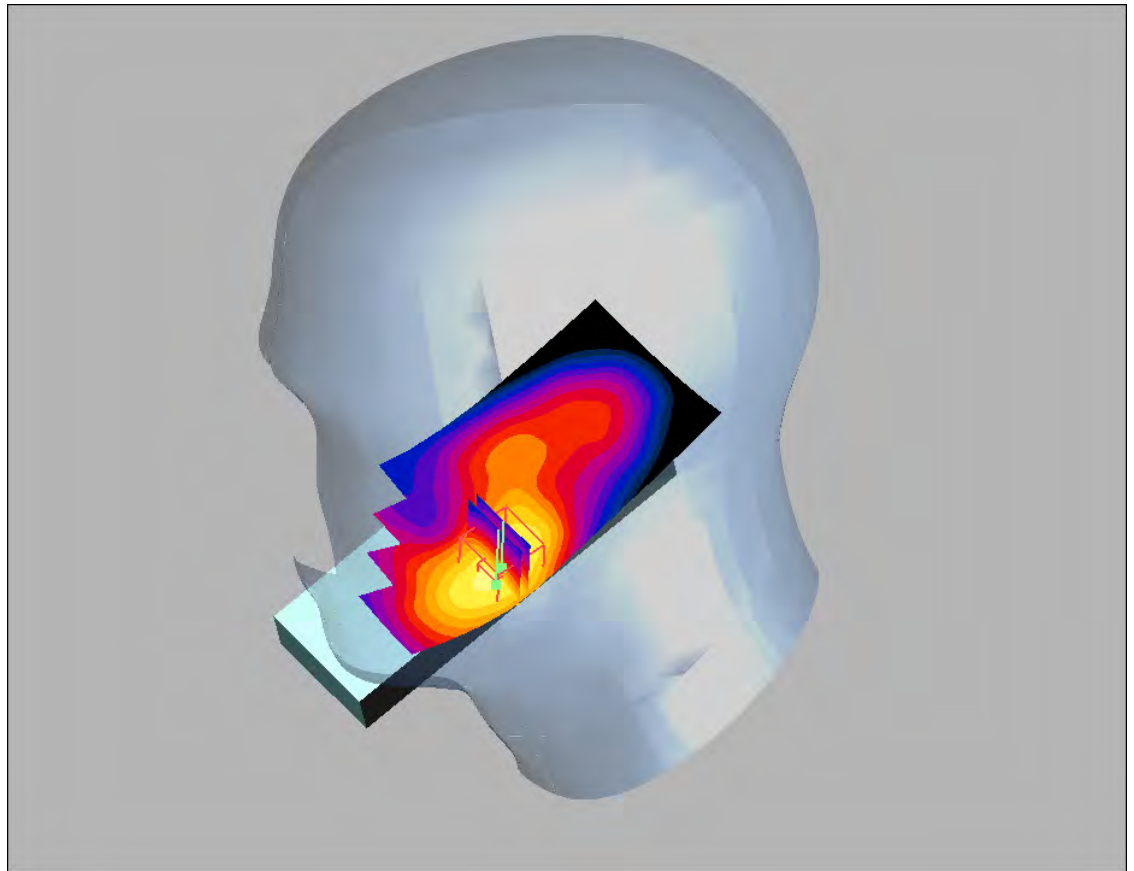
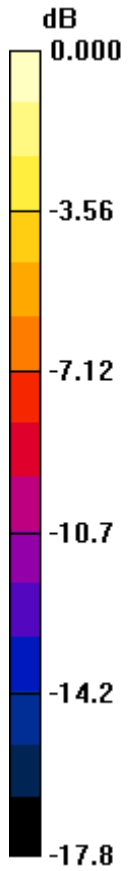
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.04 V/m; Power Drift = -0.067 dB

Maximum value of SAR (interpolated) = 0.428 mW/g



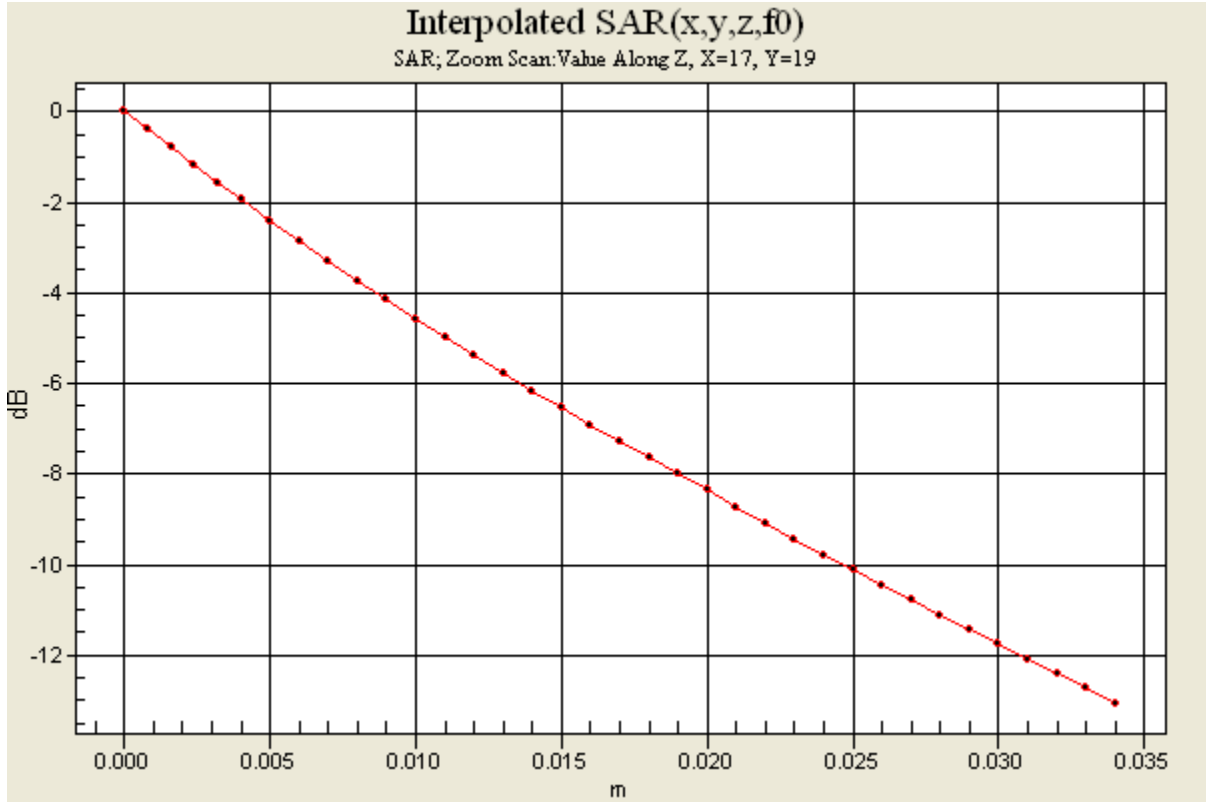
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.428mW/g



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1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 6/21/2009 11:35:01 AM

File Name: [21June09_Aino_GSM1900_25ZM_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 41.1 % Ambient Temp: 23.9 C Simulant Temp: 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel tilt/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.181 mW/g

High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.238 W/kg

SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.089 mW/g

Maximum value of SAR (measured) = 0.163 mW/g

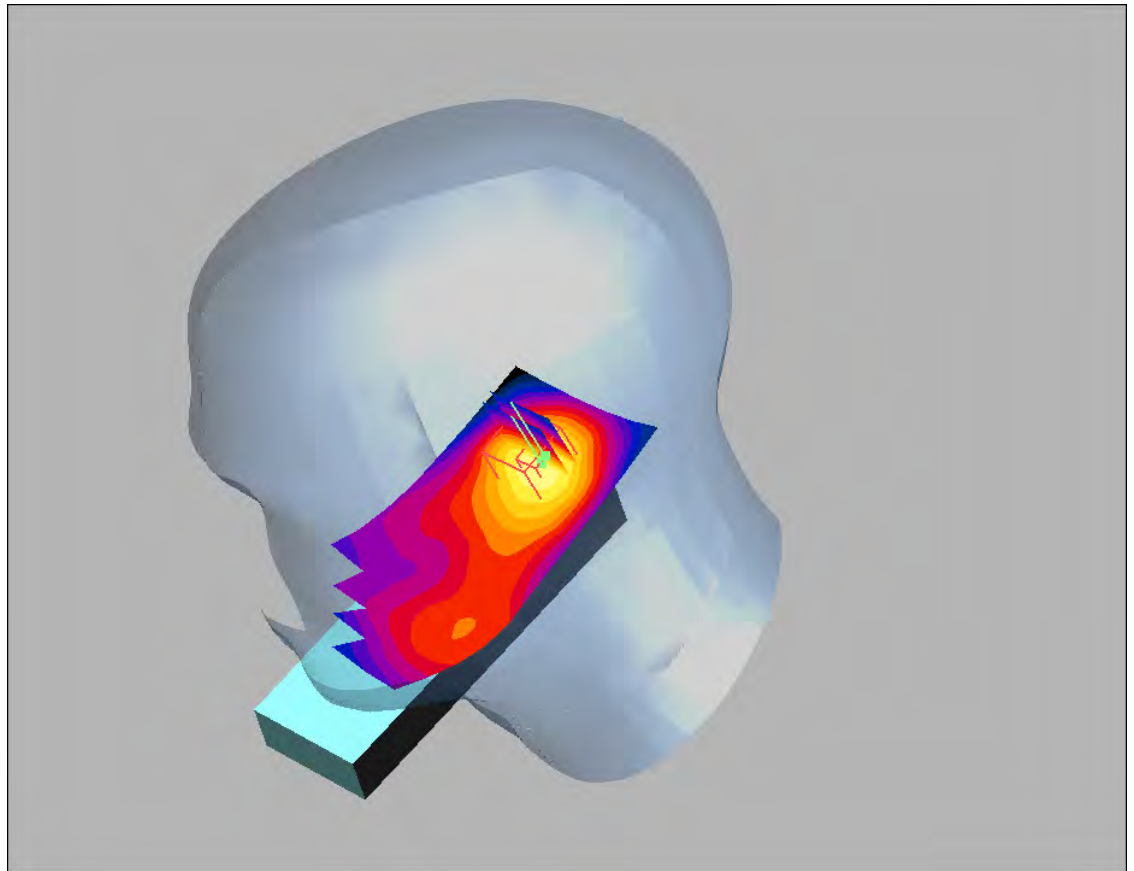
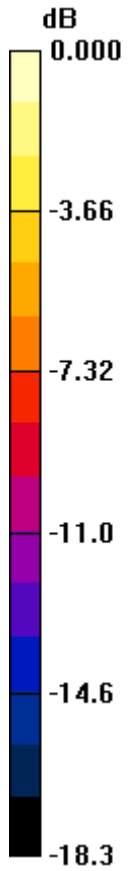
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.037 dB

Maximum value of SAR (interpolated) = 0.238 mW/g



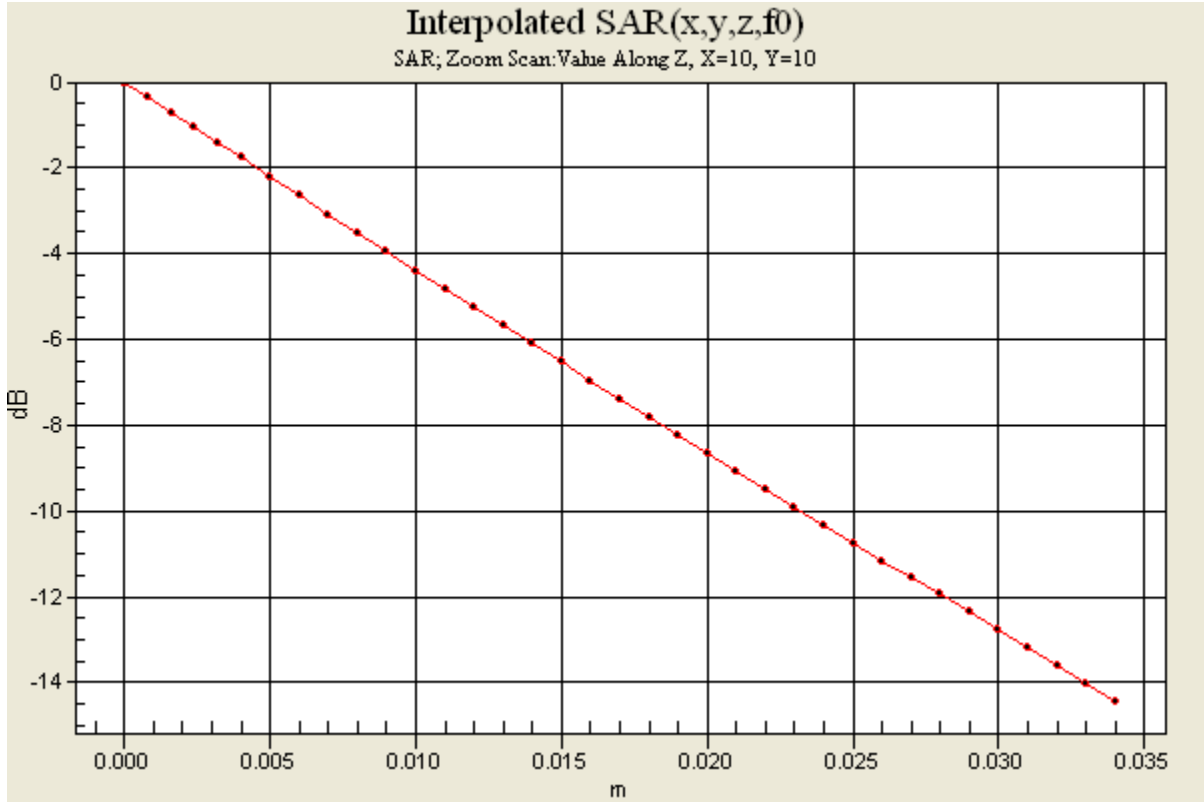
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	



0 dB = 0.238mW/g



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1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 6/21/2009 8:05:53 AM

File Name: [21June09_Aino_GSM1900_25ZM_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 41.1 % Ambient Temp: 23.9 C Simulant Temp: 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.146 mW/g

High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.09 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 0.217 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.084 mW/g

Maximum value of SAR (measured) = 0.147 mW/g

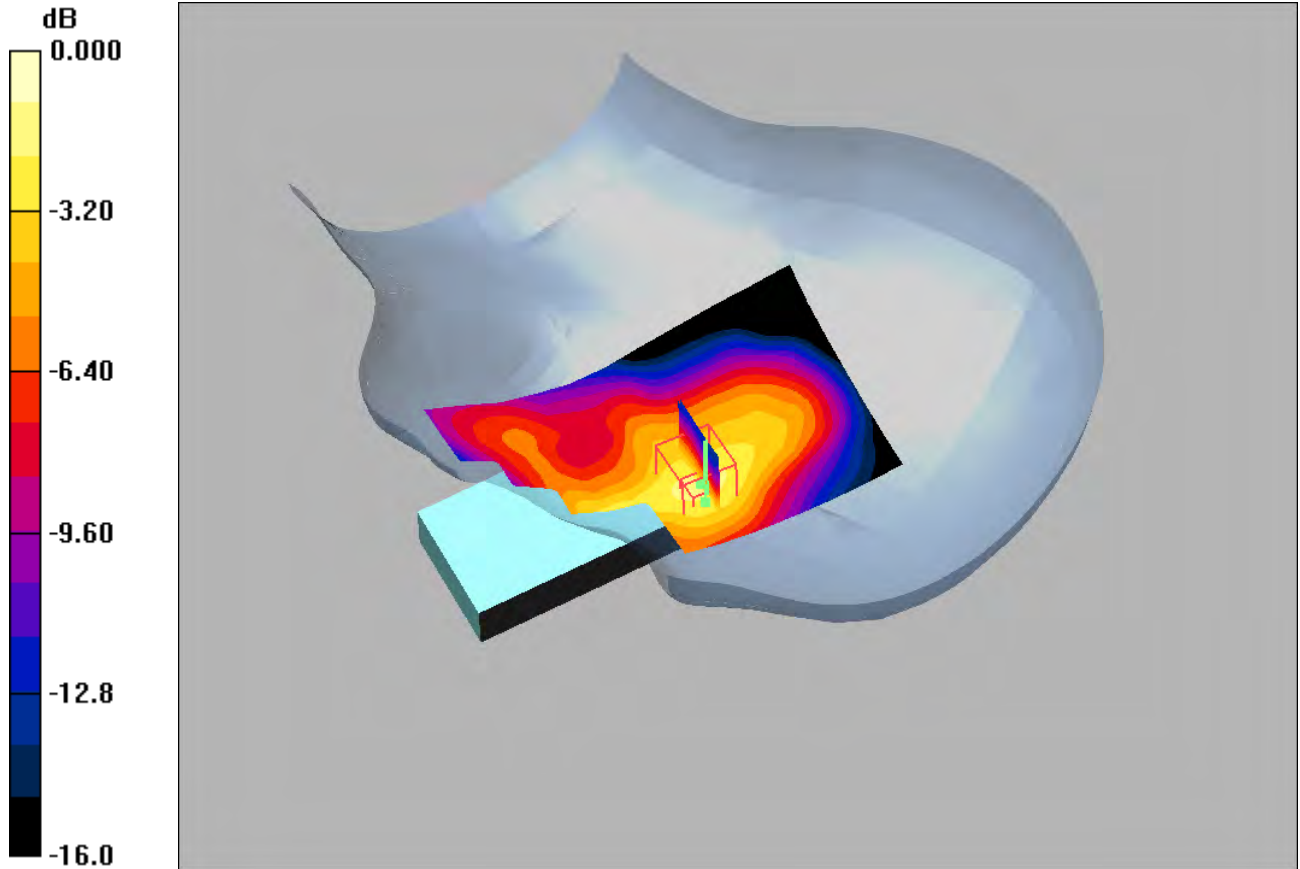
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.09 V/m; Power Drift = -0.054 dB

Maximum value of SAR (interpolated) = 0.217 mW/g



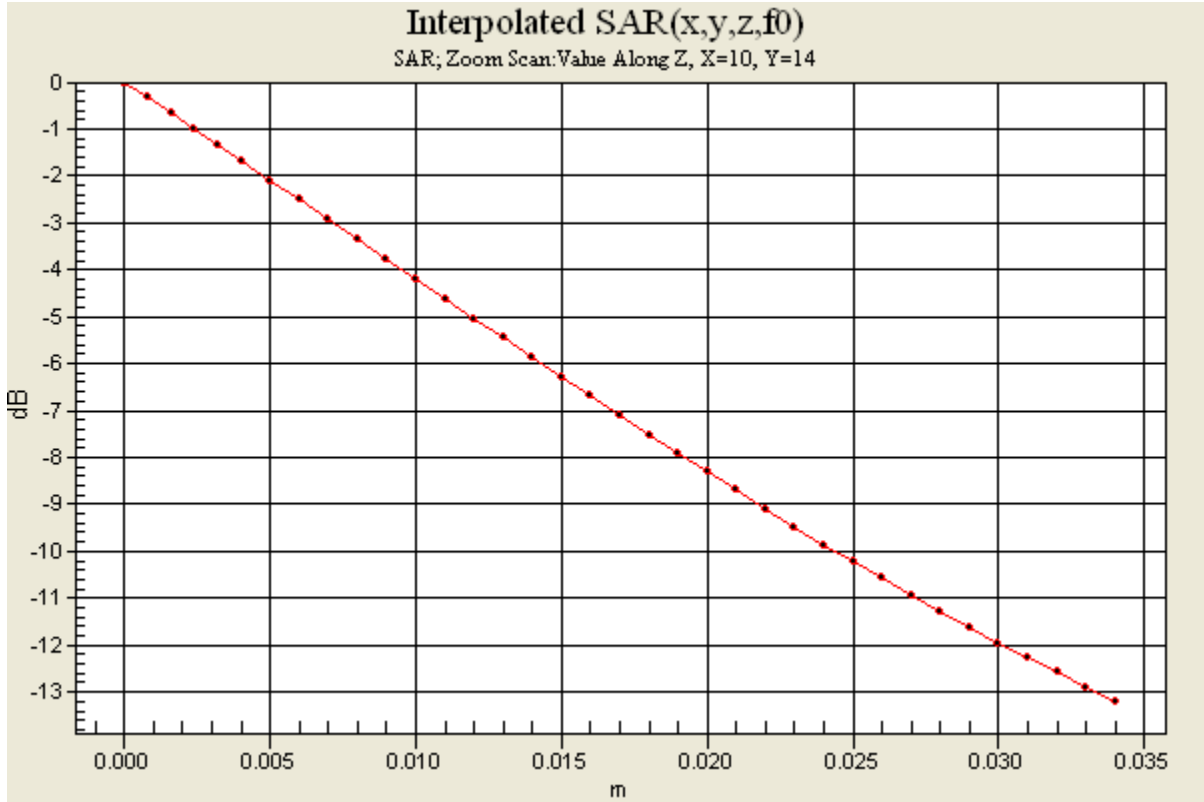
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.217mW/g



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1900 GSM Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 6/21/2009 9:12:11 AM

File Name: [21June09_Aino_GSM1900_25ZM_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST-33 Humidity: 41.1 % Ambient Temp: 23.9 C Simulant Temp: 23.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.214 mW/g

High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 0.301 W/kg

SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.108 mW/g

Maximum value of SAR (measured) = 0.196 mW/g

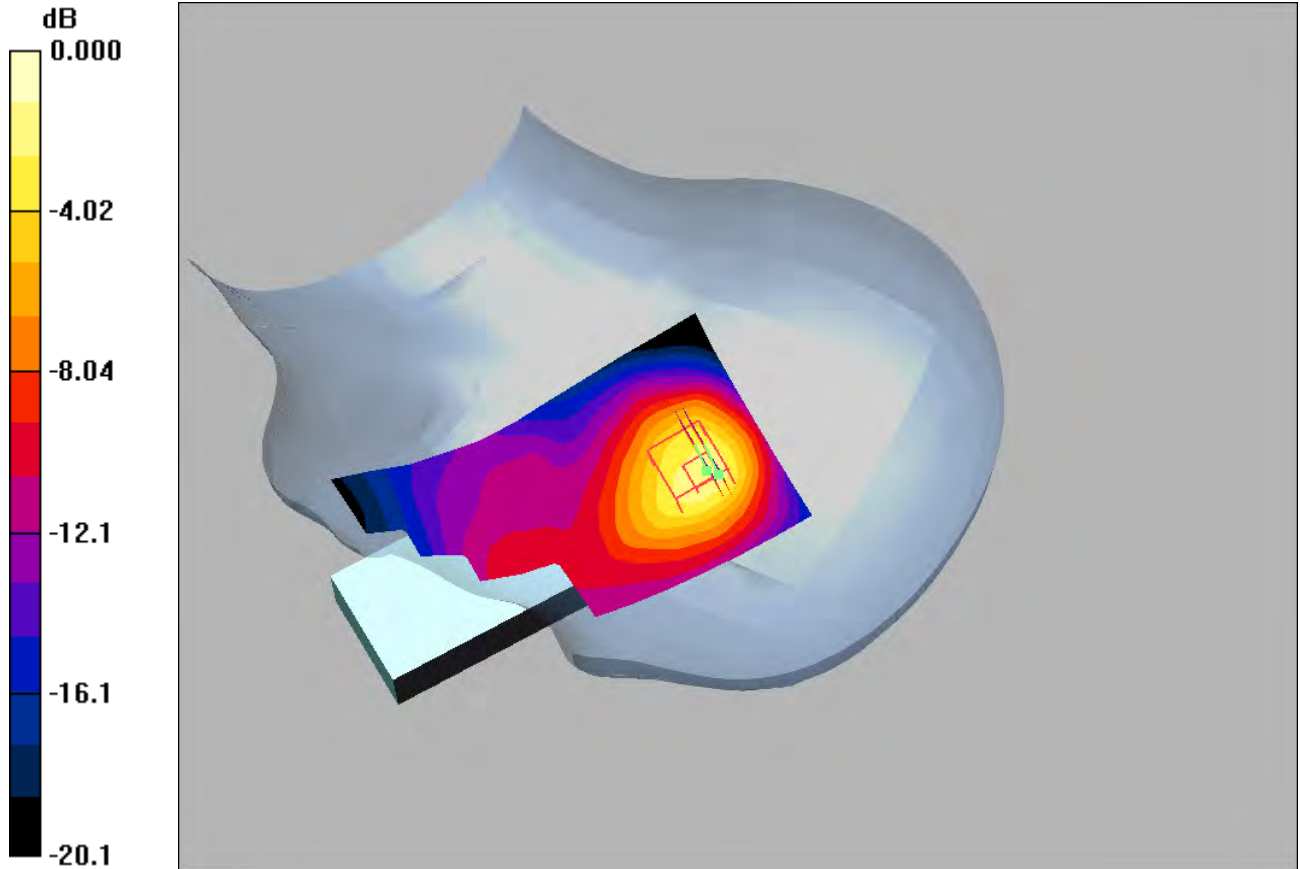
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = 0.003 dB

Maximum value of SAR (interpolated) = 0.301 mW/g



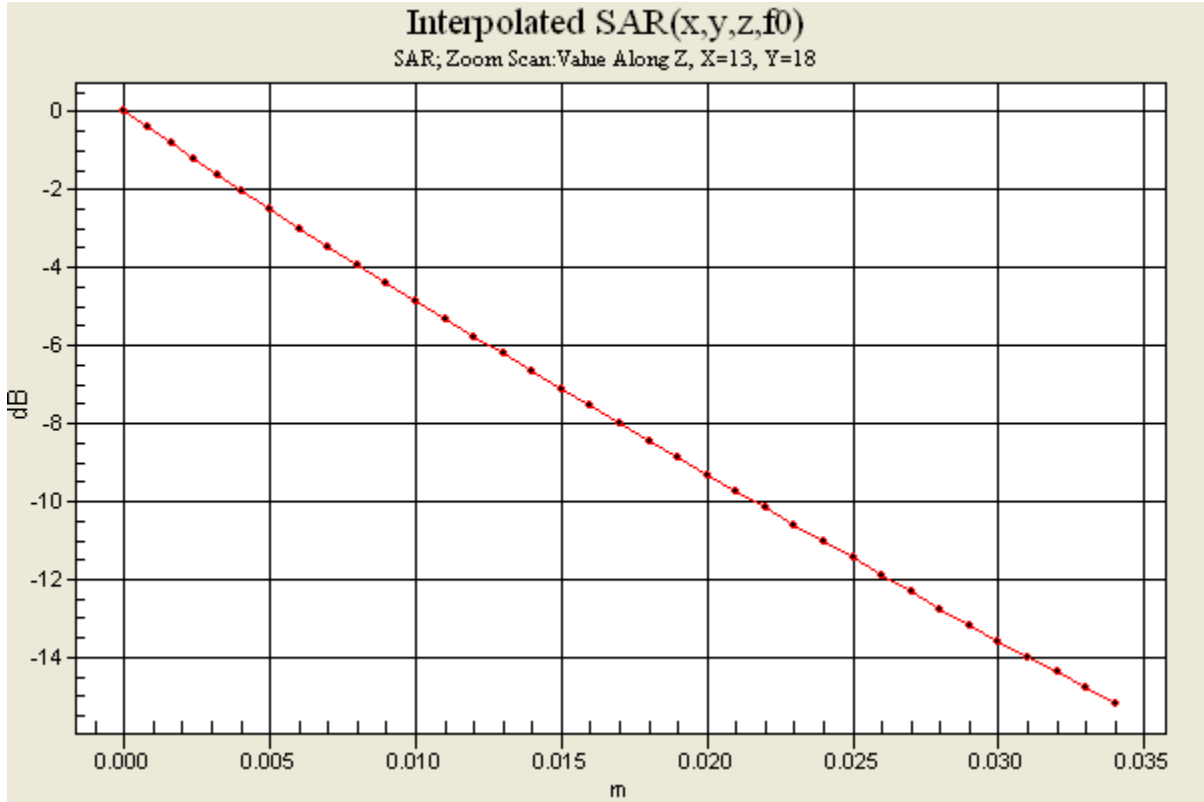
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.301mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 7/8/2009 9:54:09 AM

File Name: [08July09_Aino_B2WCDMA_25ZK_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 40.4 % Ambient Temp - 24.3 C Simulant Temp - 24 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.625 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.52 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.332 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.563 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

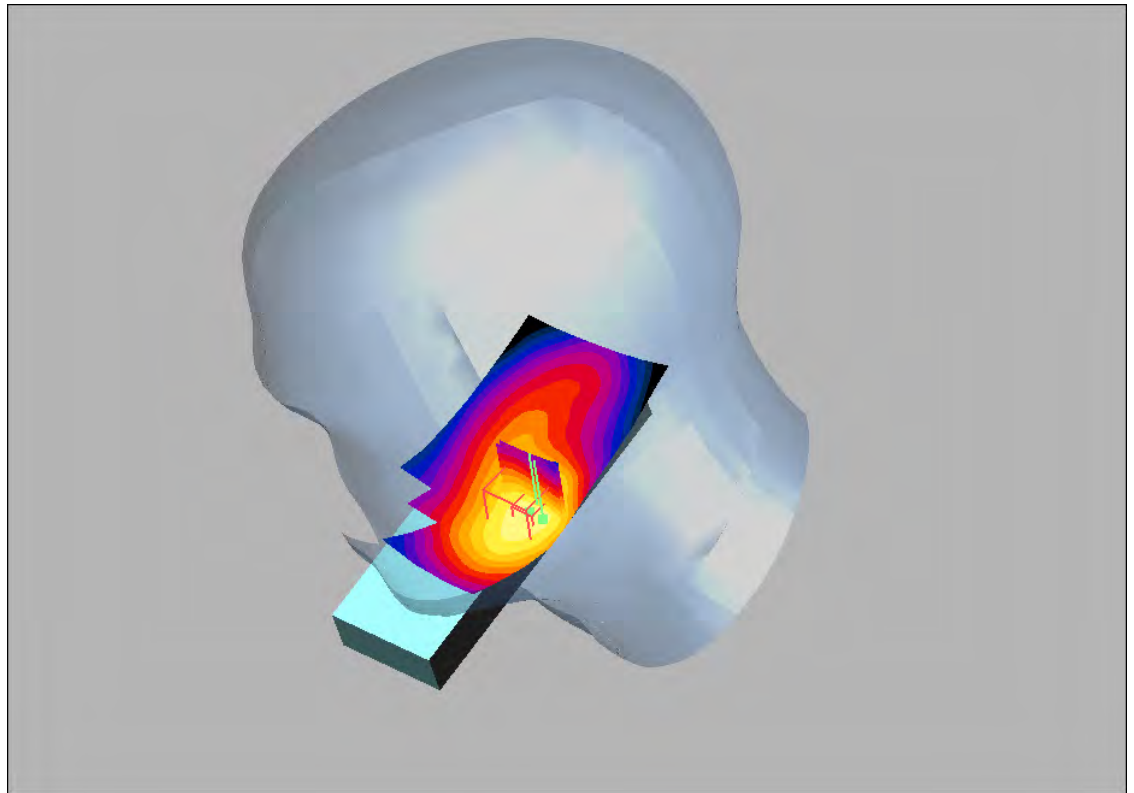
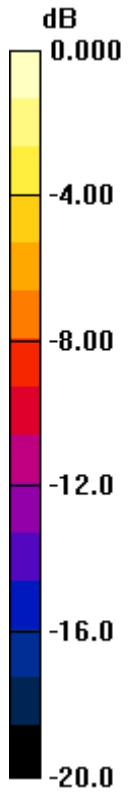
Reference Value = 7.52 V/m; Power Drift = -0.060 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.847 mW/g



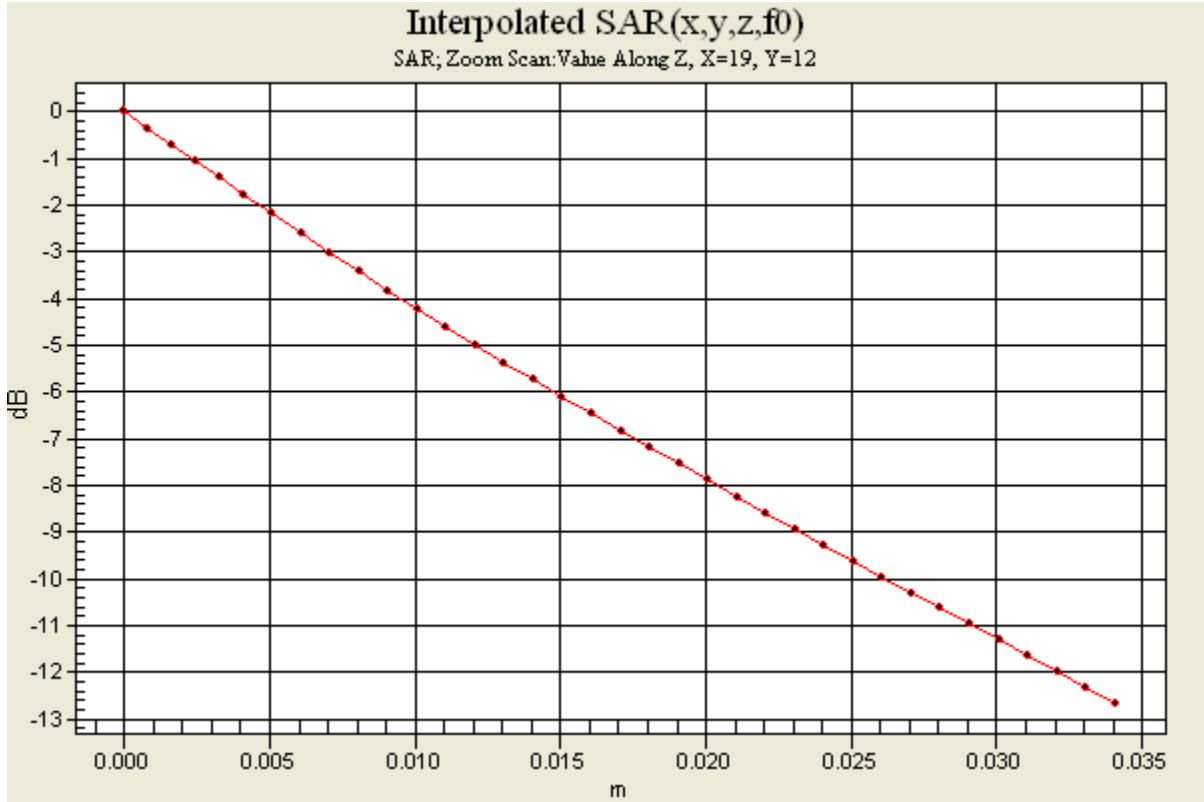
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.847mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 7/8/2009 11:09:26 AM

File Name: [08July09_Aino_B2WCDMA_25ZK_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 40.4 % Ambient Temp - 24.3 C Simulant Temp - 24 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.295 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.5 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.365 W/kg

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.158 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.275 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

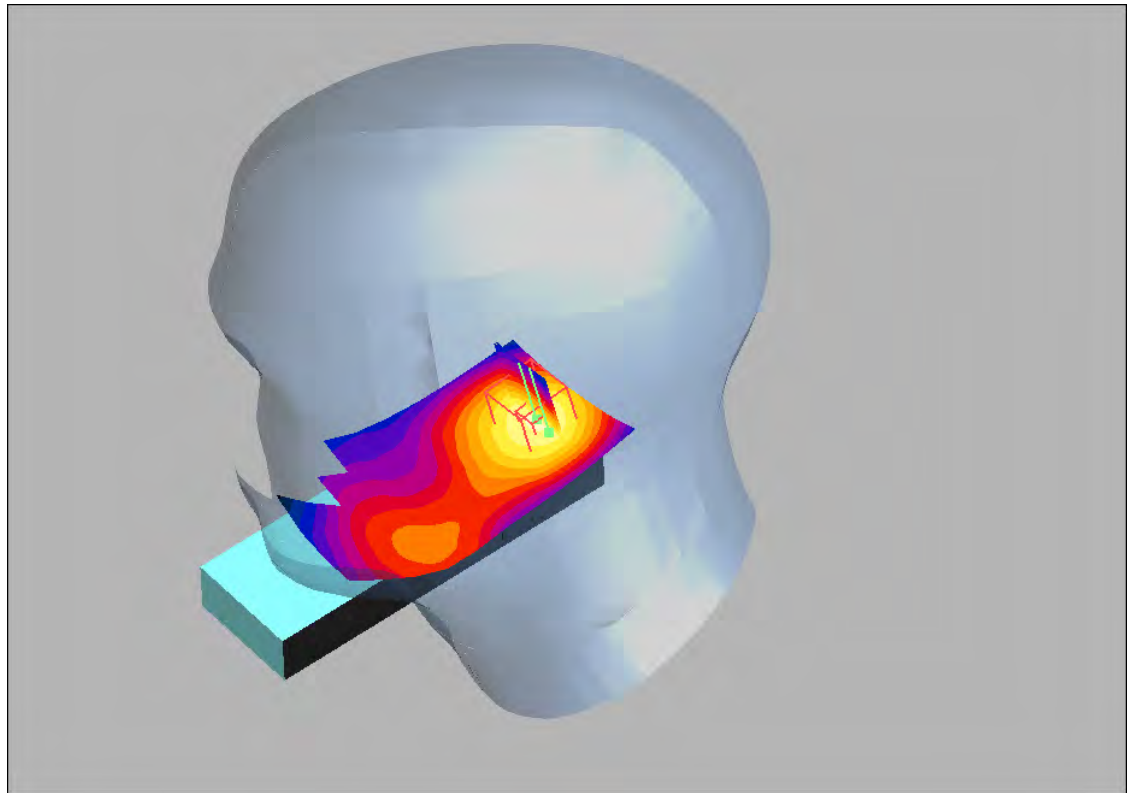
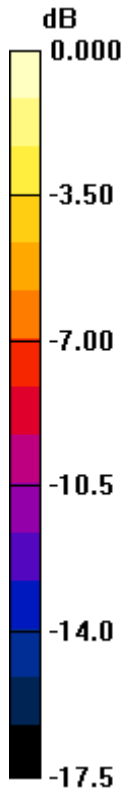
Reference Value = 13.5 V/m; Power Drift = 0.000 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.365 mW/g



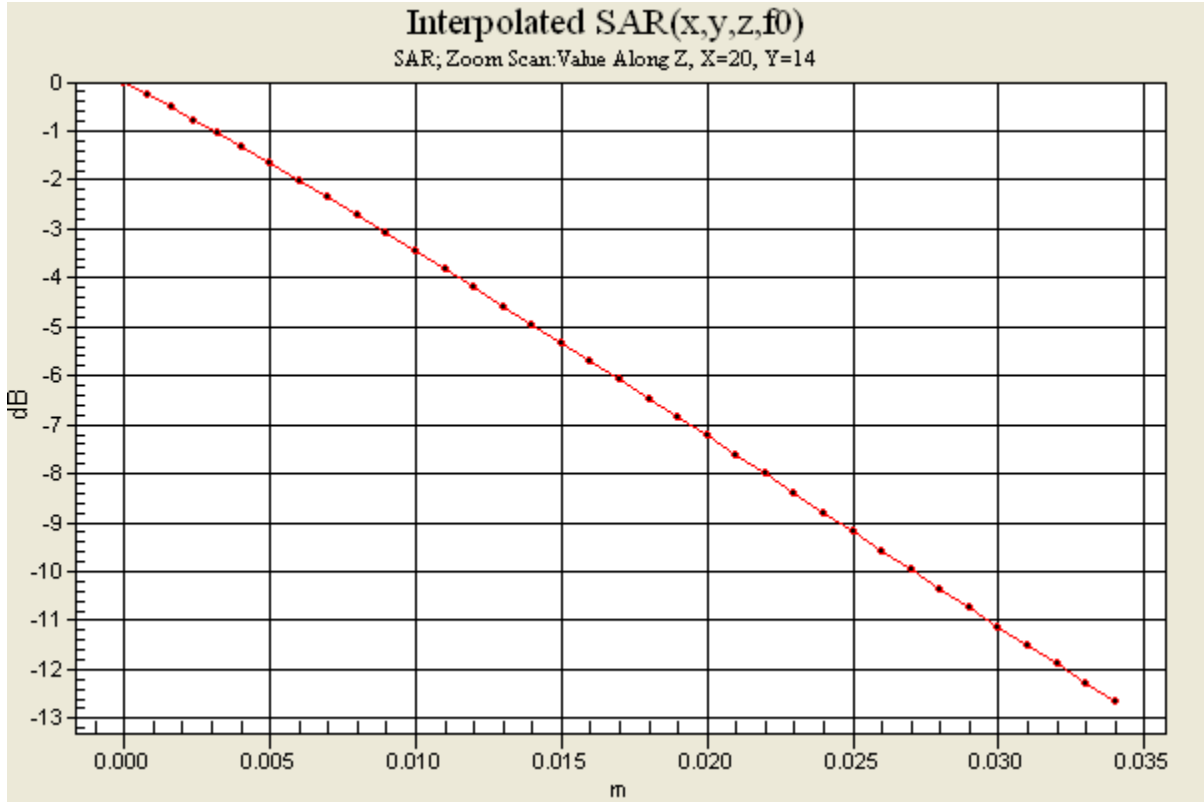
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0 dB = 0.365mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 7/8/2009 7:18:50 AM

File Name: [08July09 Aino B2WCDMA 25ZK open LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 40.4 % Ambient Temp - 24.3 C Simulant Temp - 24 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.306 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.81 V/m; Power Drift = -0.100 dB

Peak SAR (extrapolated) = 0.434 W/kg

SAR(1 g) = 0.280 mW/g; SAR(10 g) = 0.185 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.300 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

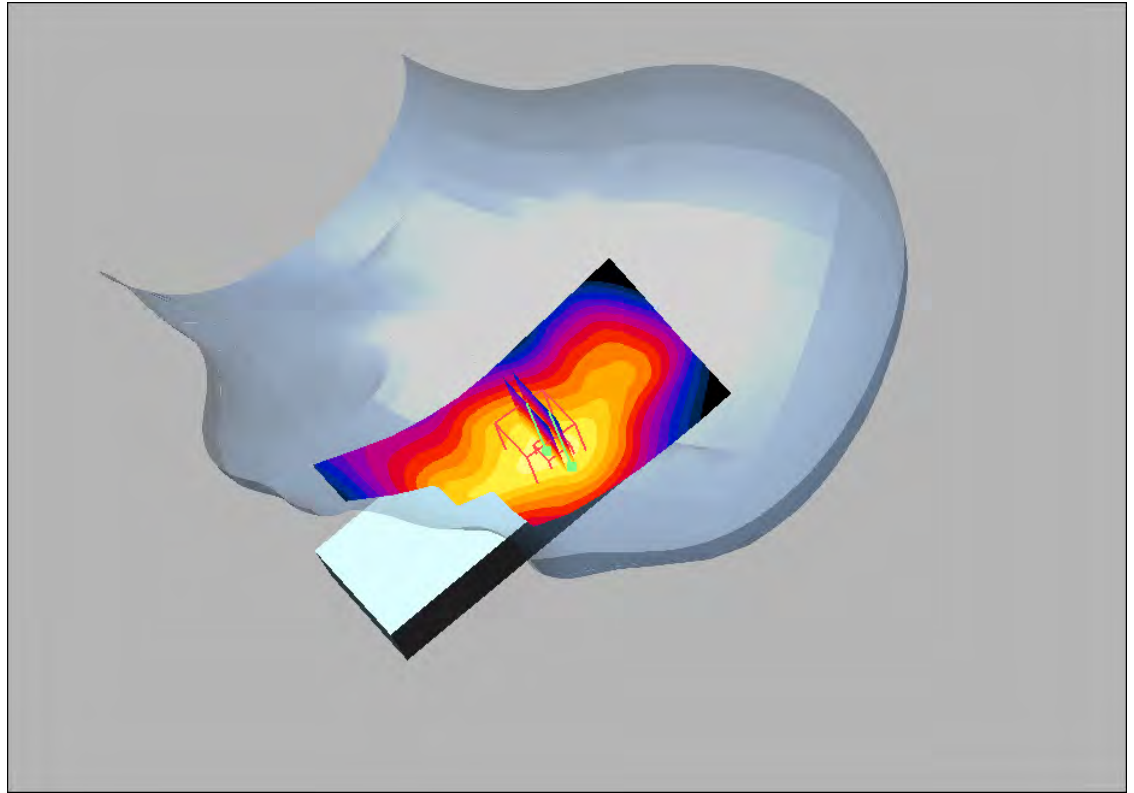
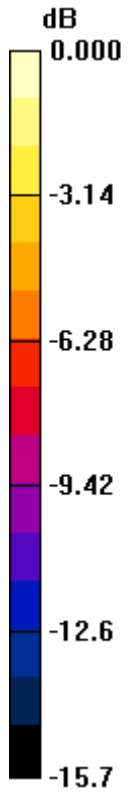
Reference Value = 7.81 V/m; Power Drift = -0.100 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.434 mW/g



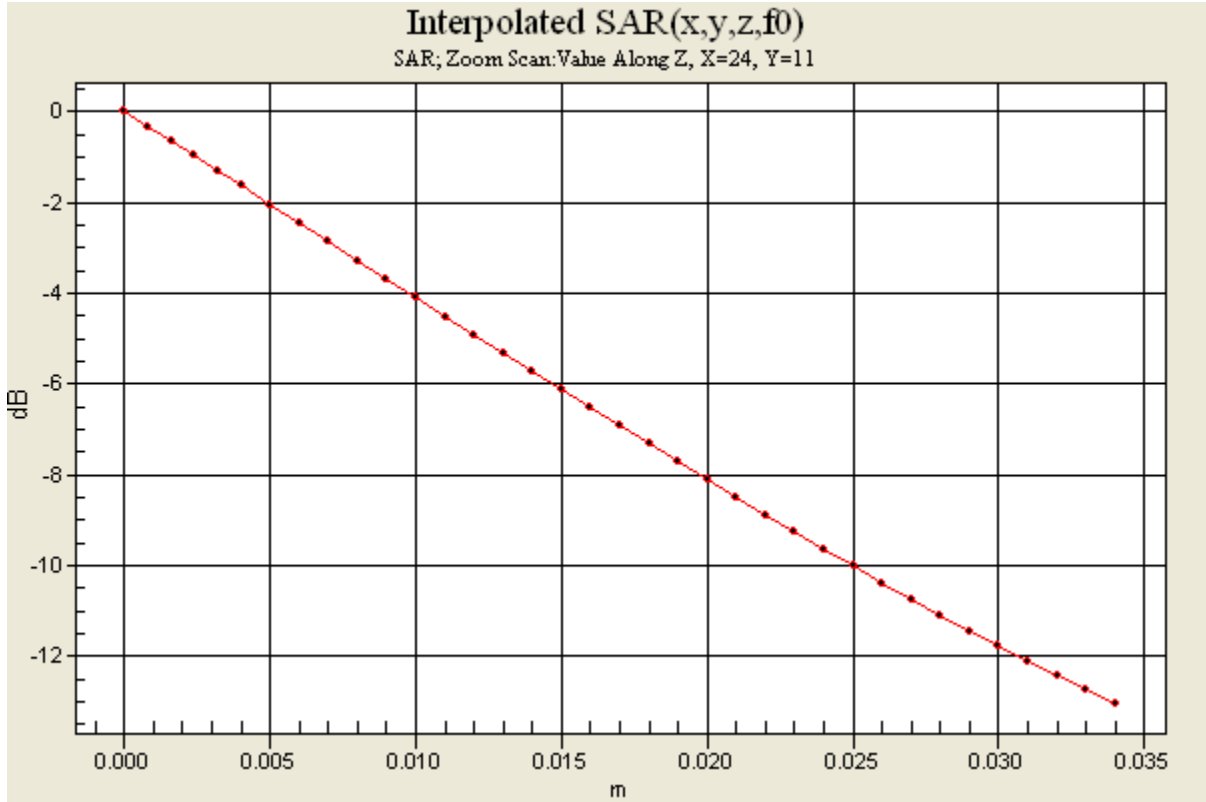
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0 dB = 0.434mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 7/8/2009 8:24:05 AM

File Name: [08July09_Aino_B2WCDMA_25ZK_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (High Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(5.1, 5.1, 5.1)

Medium parameters used (interpolated): $f = 1852.6$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 40.4 % Ambient Temp - 24.3 C Simulant Temp - 24 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.377 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.4 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.486 W/kg

SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.191 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.349 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

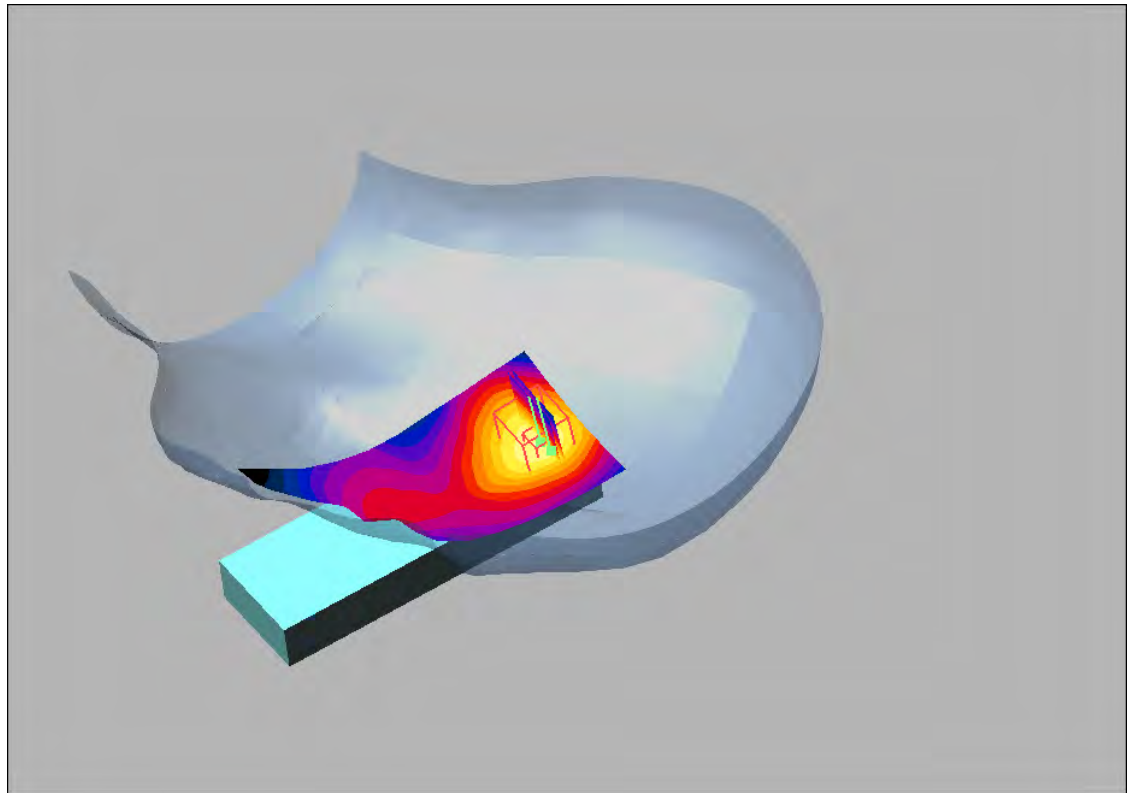
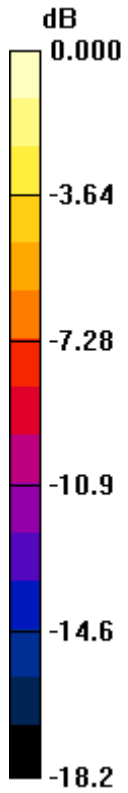
Reference Value = 14.4 V/m; Power Drift = -0.018 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.486 mW/g



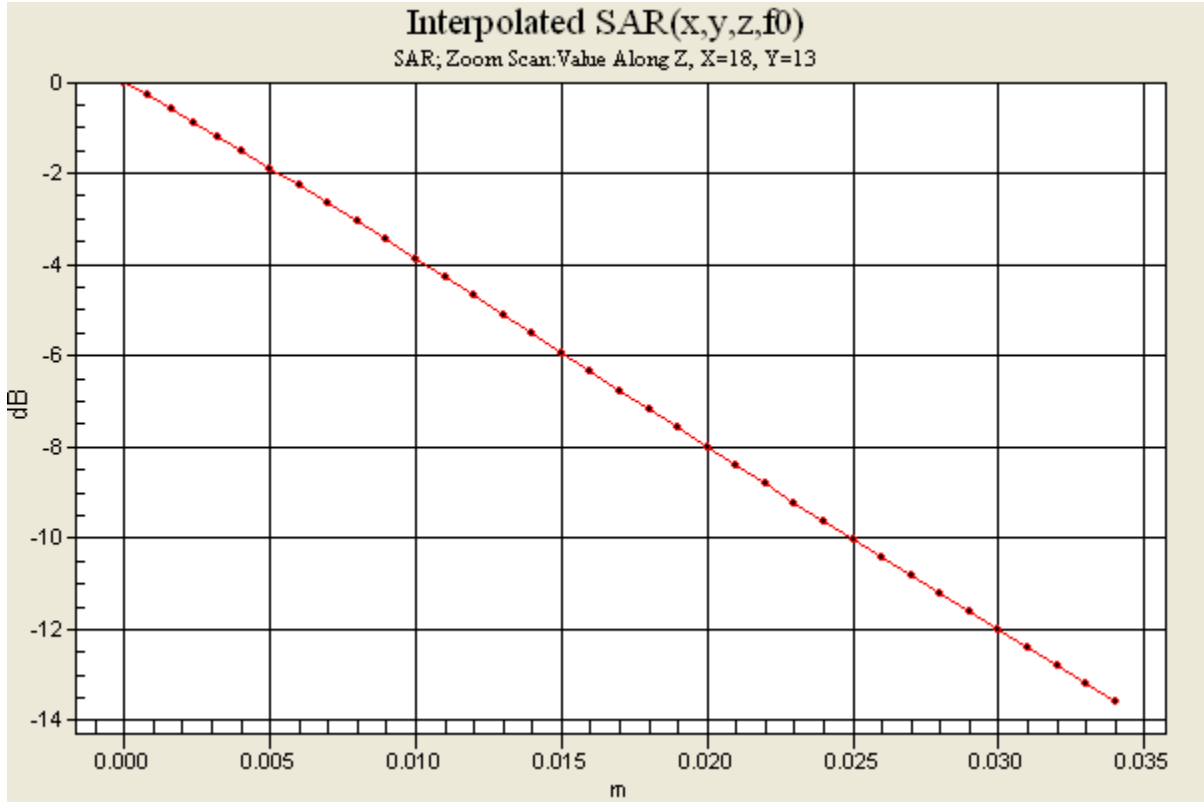
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.486mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked		A

Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Cheek Position.

Date/Time: 7/7/2009 5:56:57 AM

File Name: [06July09_Aino_B5WCDMA_25YB_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head)Phantom section: Right Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 826.6 MHz; $\sigma = 0.898$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 43.1 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.532 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 0.702 W/kg

SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.360 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.557 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

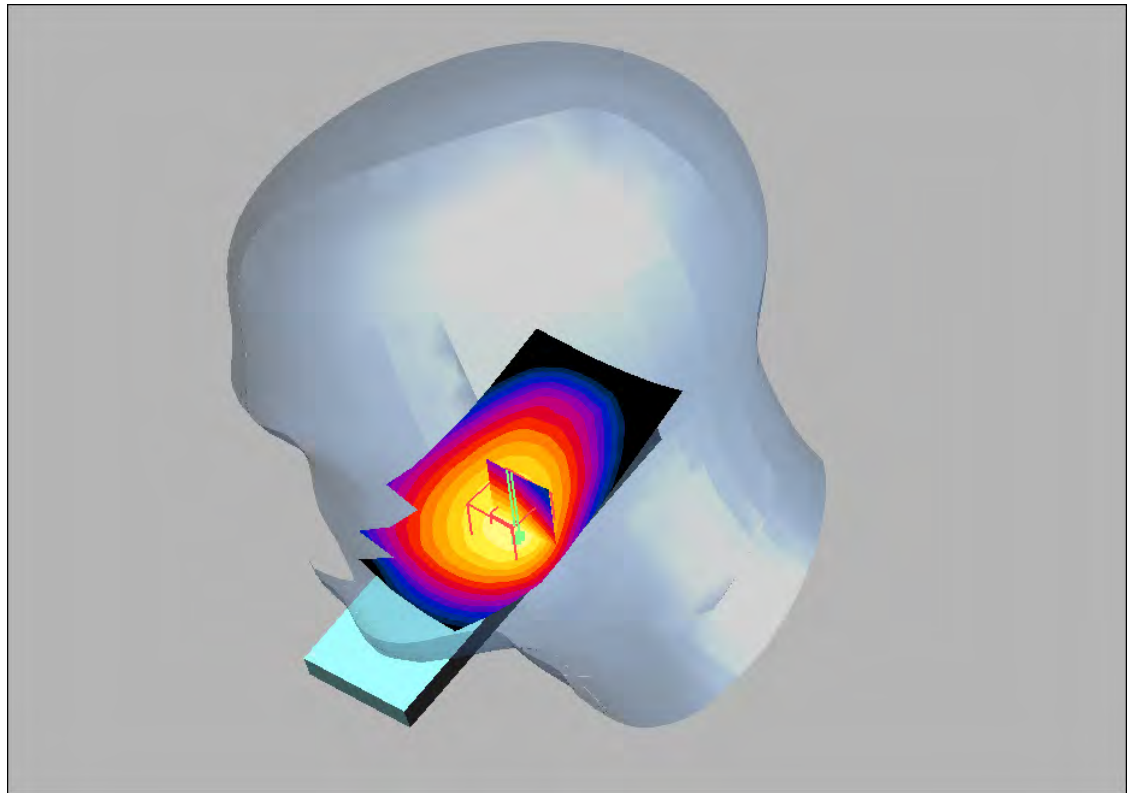
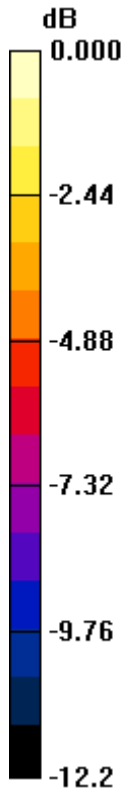
Reference Value = 10.6 V/m; Power Drift = -0.009 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.702 mW/g



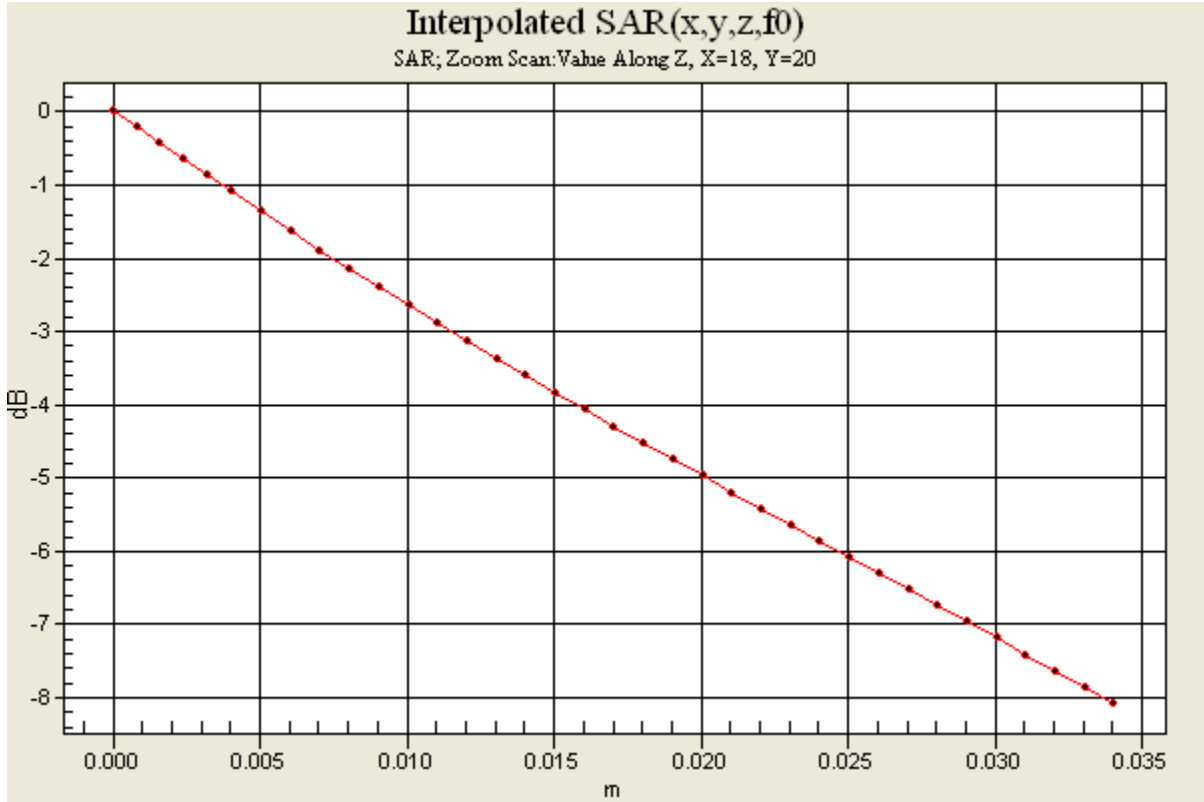
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.702mW/g



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Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt Position.

Date/Time: 7/7/2009 7:01:47 AM

File Name: [06July09_Aino_B5WCDMA_25YB_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head) Phantom section: Right Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 826.6 MHz; $\sigma = 0.898$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 43.1 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.297 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.1 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 0.357 W/kg

SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.211 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.300 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

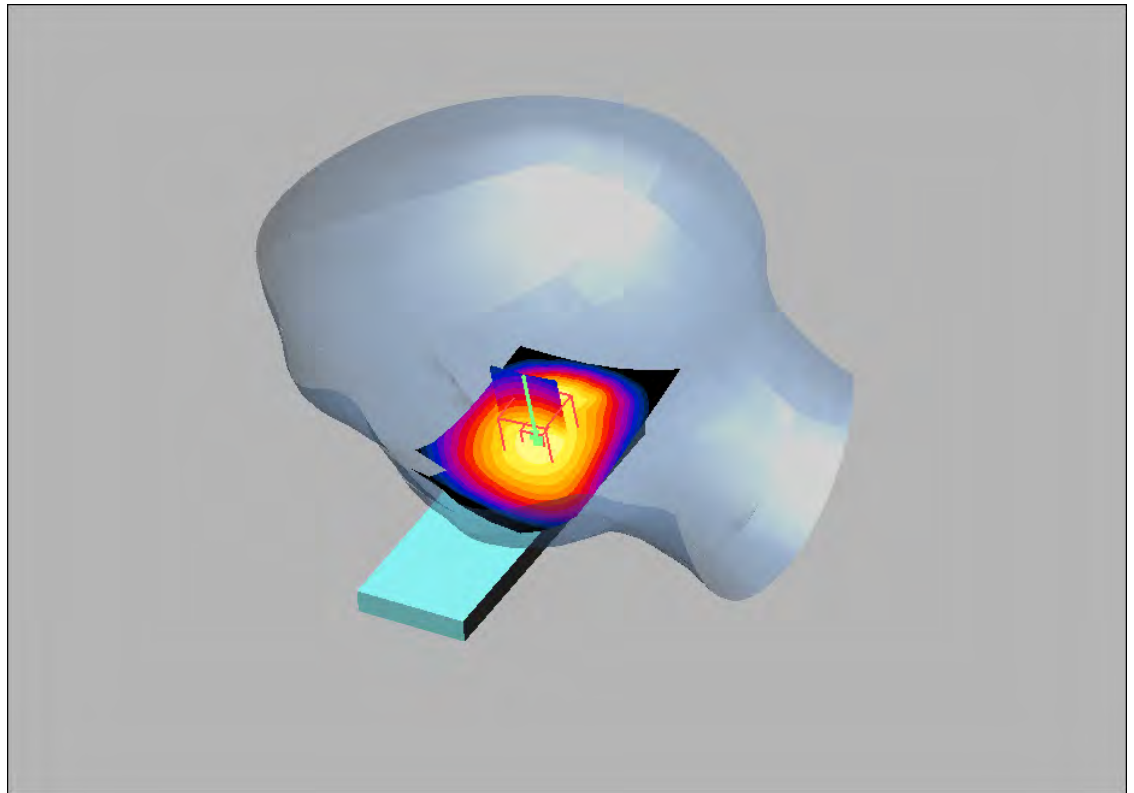
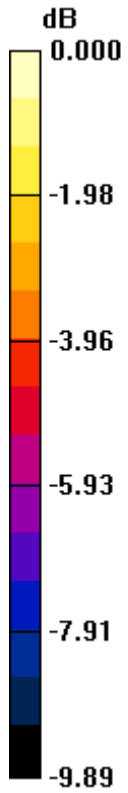
Reference Value = 16.1 V/m; Power Drift = 0.001 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.357 mW/g



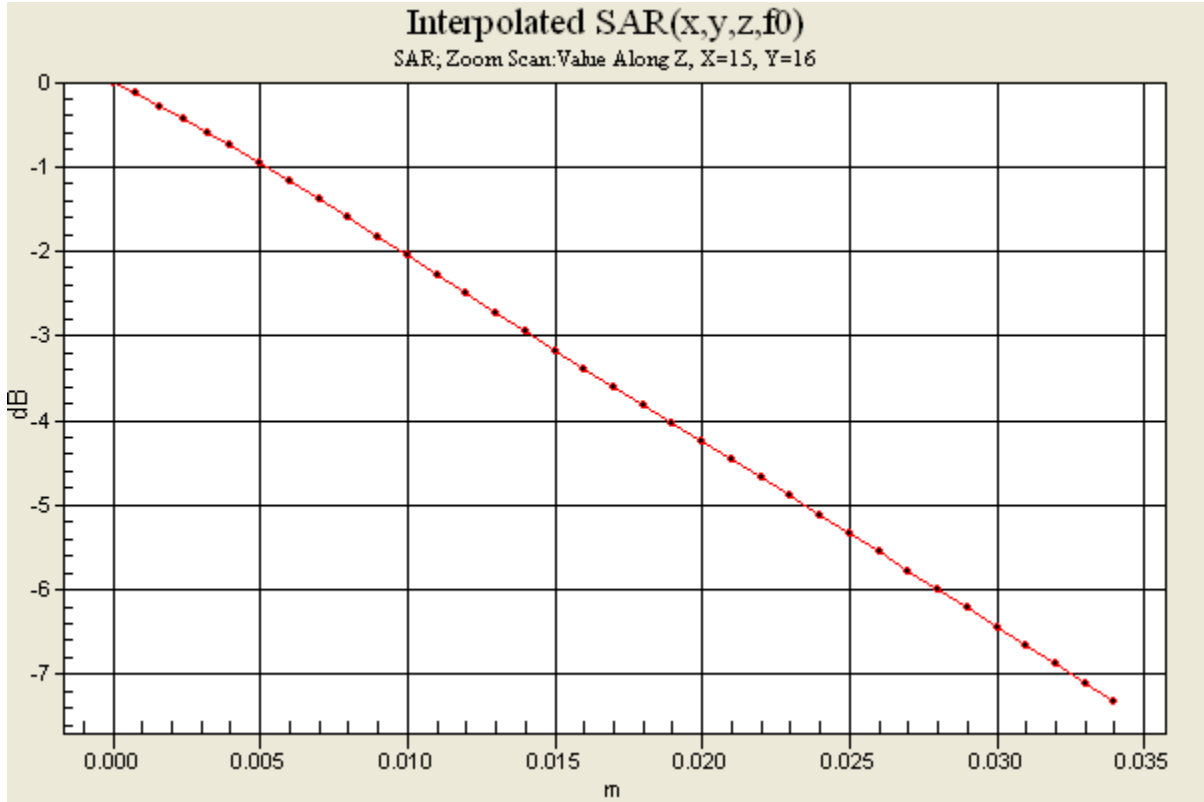
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.357mW/g



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Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Cheek Position.

Date/Time: 7/6/2009 10:59:34 AM

File Name: [06July09_Aino_B5WCDMA_25YB_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head)Phantom section: Left Section

Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): f = 826.6 MHz; $\sigma = 0.898$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 43.1 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel check/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.507 mW/g

Low channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.93 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.606 W/kg

SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.355 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.512 mW/g

Low channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

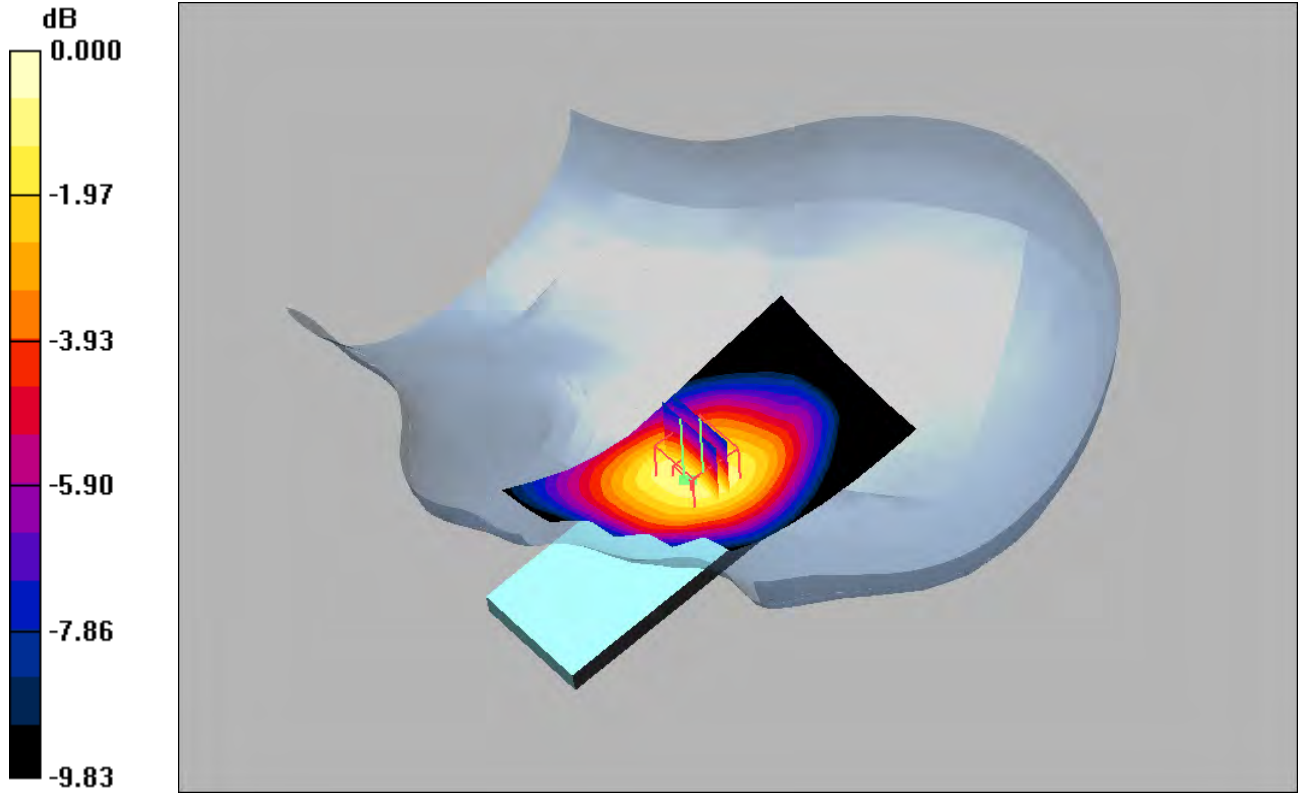
Reference Value = 9.93 V/m; Power Drift = -0.029 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.606 mW/g



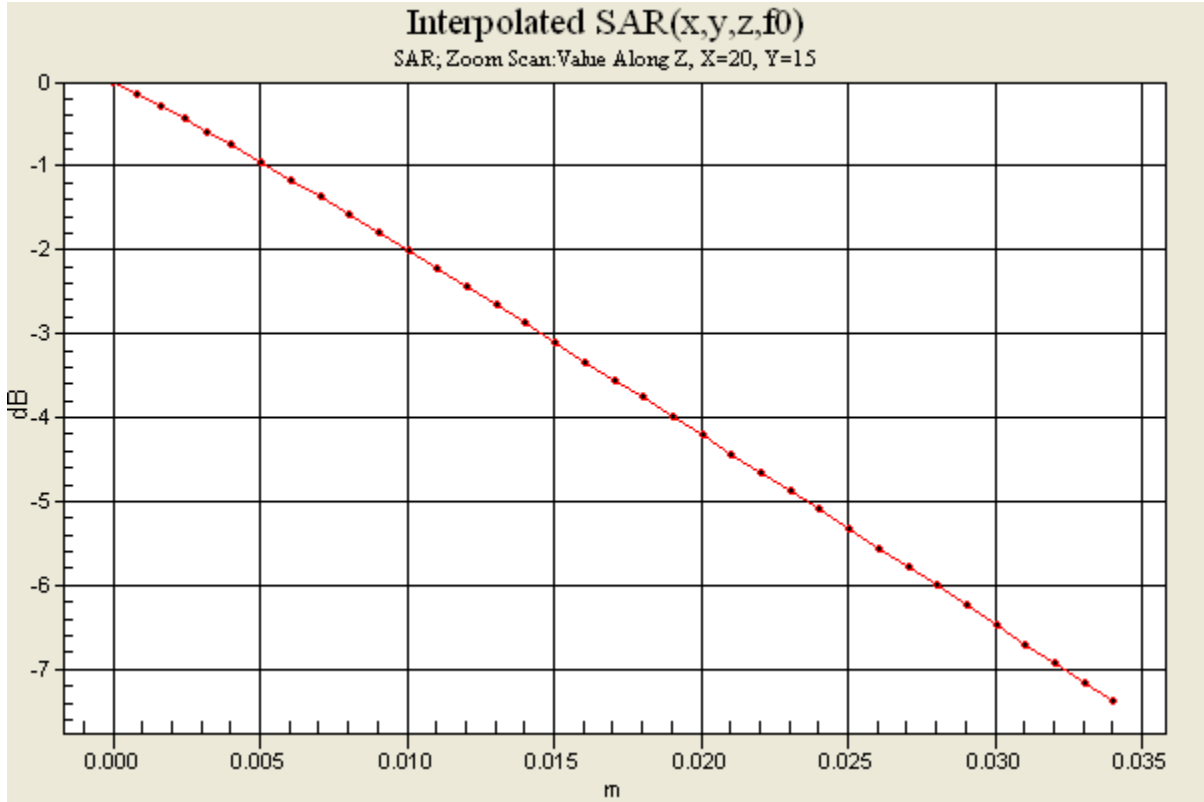
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.606mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Band V WCDMA Band: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt Position.

Date/Time: 7/6/2009 12:13:22 PM

File Name: [06July09_Aino_B5WCDMA_25YB_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (Low Band Head) Phantom section: Left Section

Probe: ET3DV6 - SN1587 ConvF(6.39, 6.39, 6.39)

Medium parameters used (interpolated): $f = 826.6$ MHz; $\sigma = 0.898$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 43.1 % Ambient Temp: 23.6 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.311 mW/g

Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.7 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 0.371 W/kg

SAR(1 g) = 0.293 mW/g; SAR(10 g) = 0.216 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.312 mW/g

Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

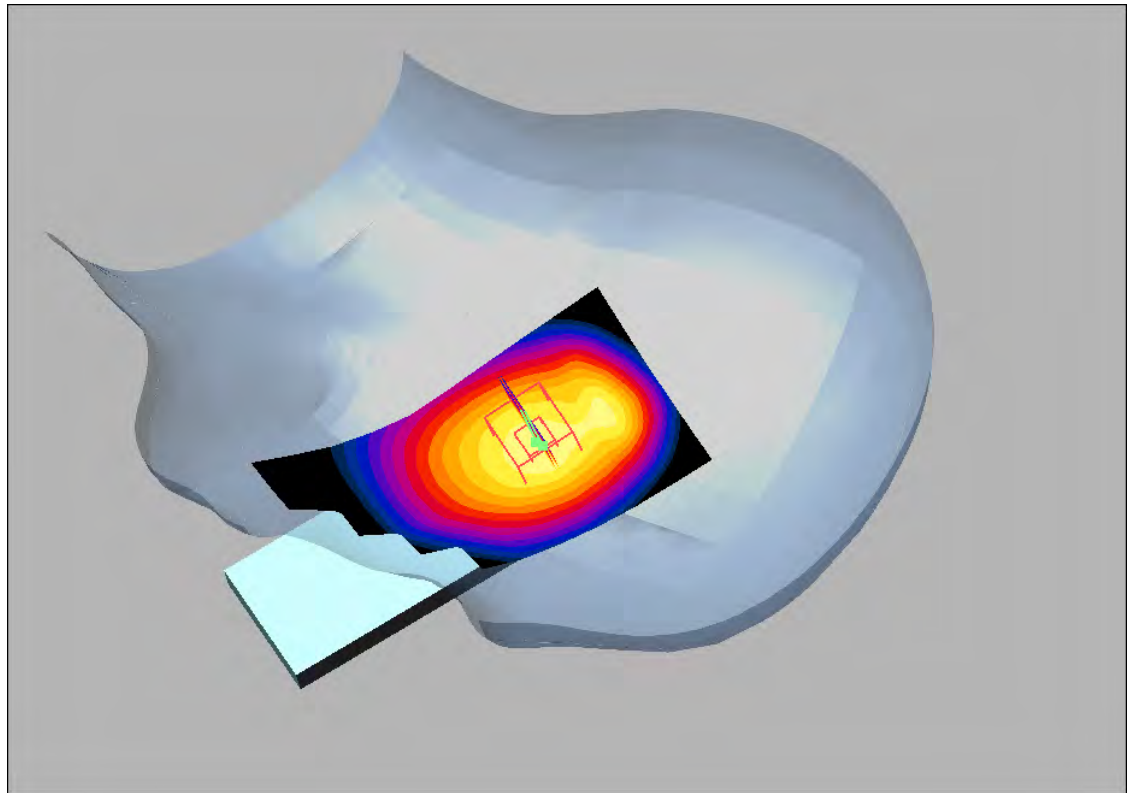
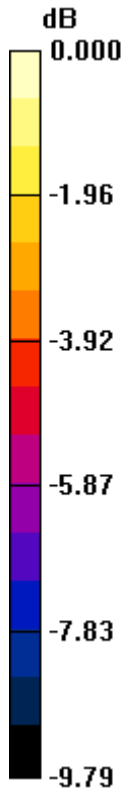
Reference Value = 16.7 V/m; Power Drift = 0.015 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.371 mW/g



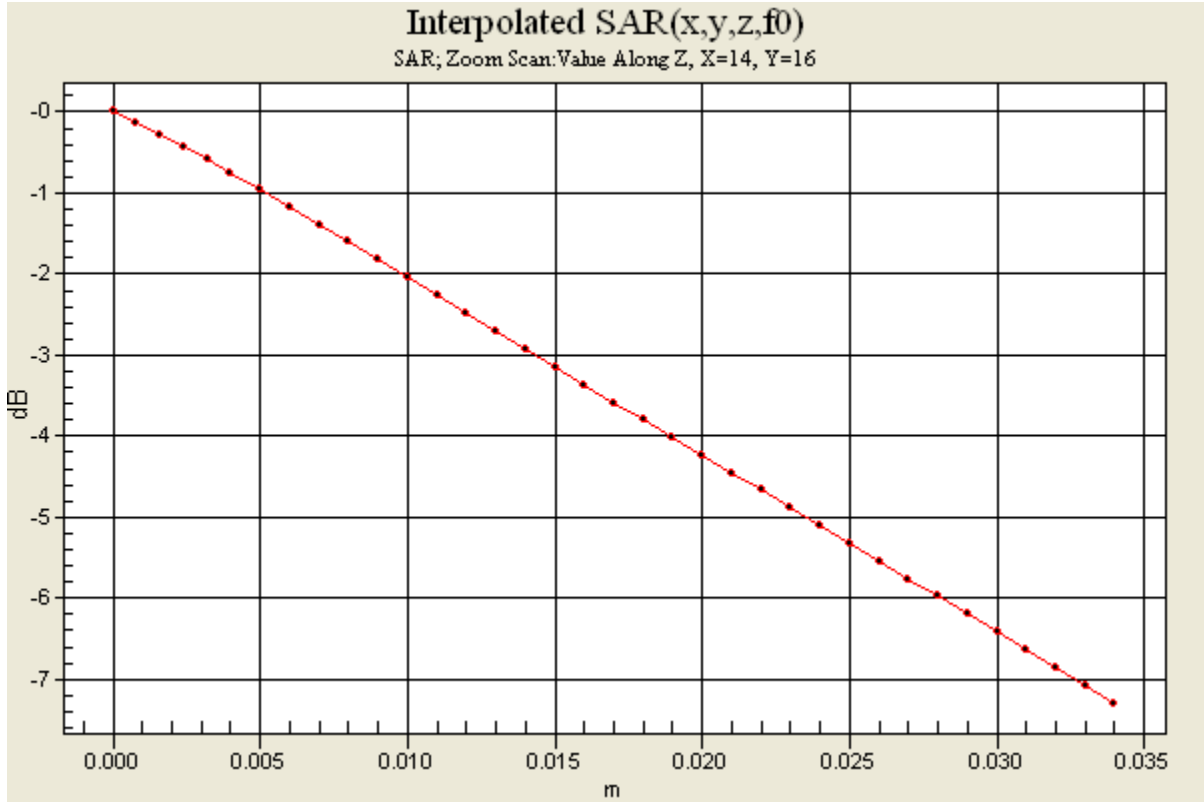
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.371mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

WLAN: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Check Position.

Date/Time: 7/15/2009 9:45:25 AM

File Name: [15July09_Aino_WLAN2450_2613_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-38 Humidity: 43.3 % Ambient Temp: 21.8 C Simulant Temp: 22 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel check/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.052 mW/g

High FCC channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.45 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.025 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.053 mW/g

High FCC channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

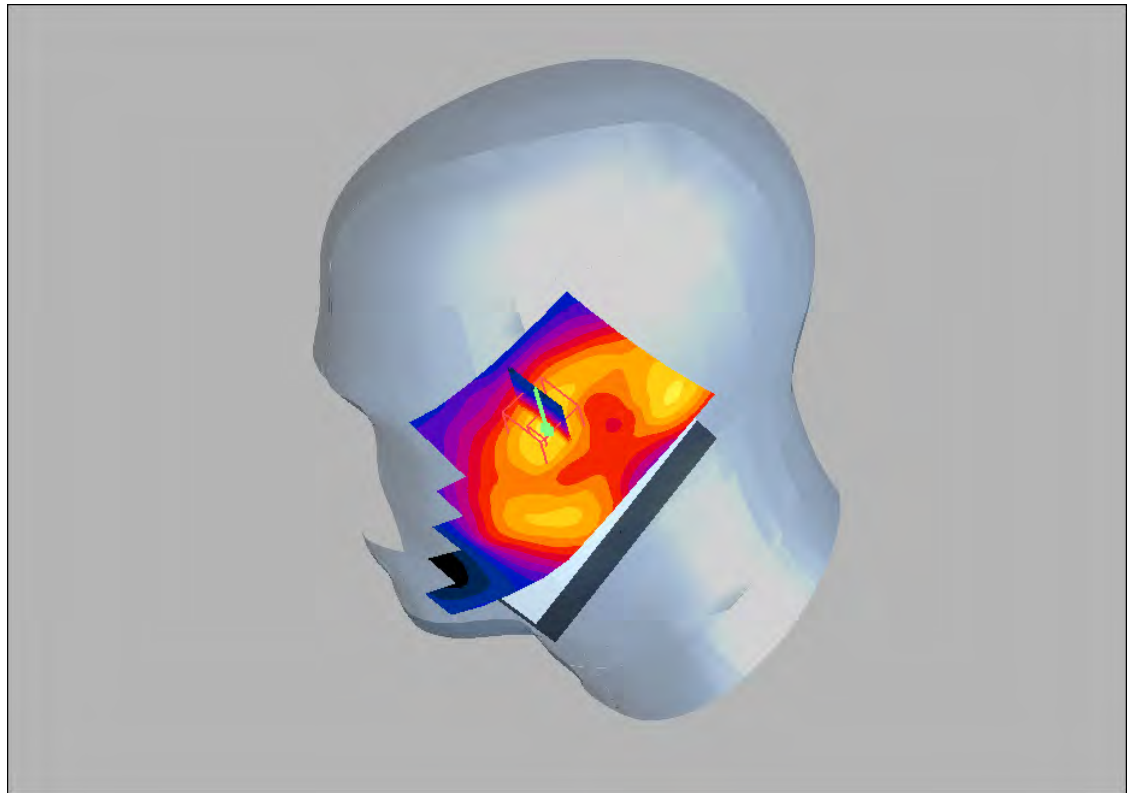
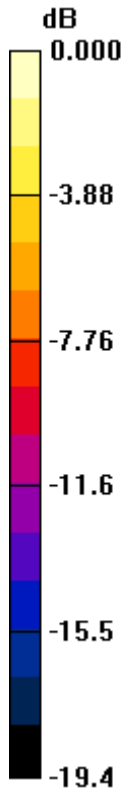
Reference Value = 3.45 V/m; Power Drift = -0.001 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.117 mW/g



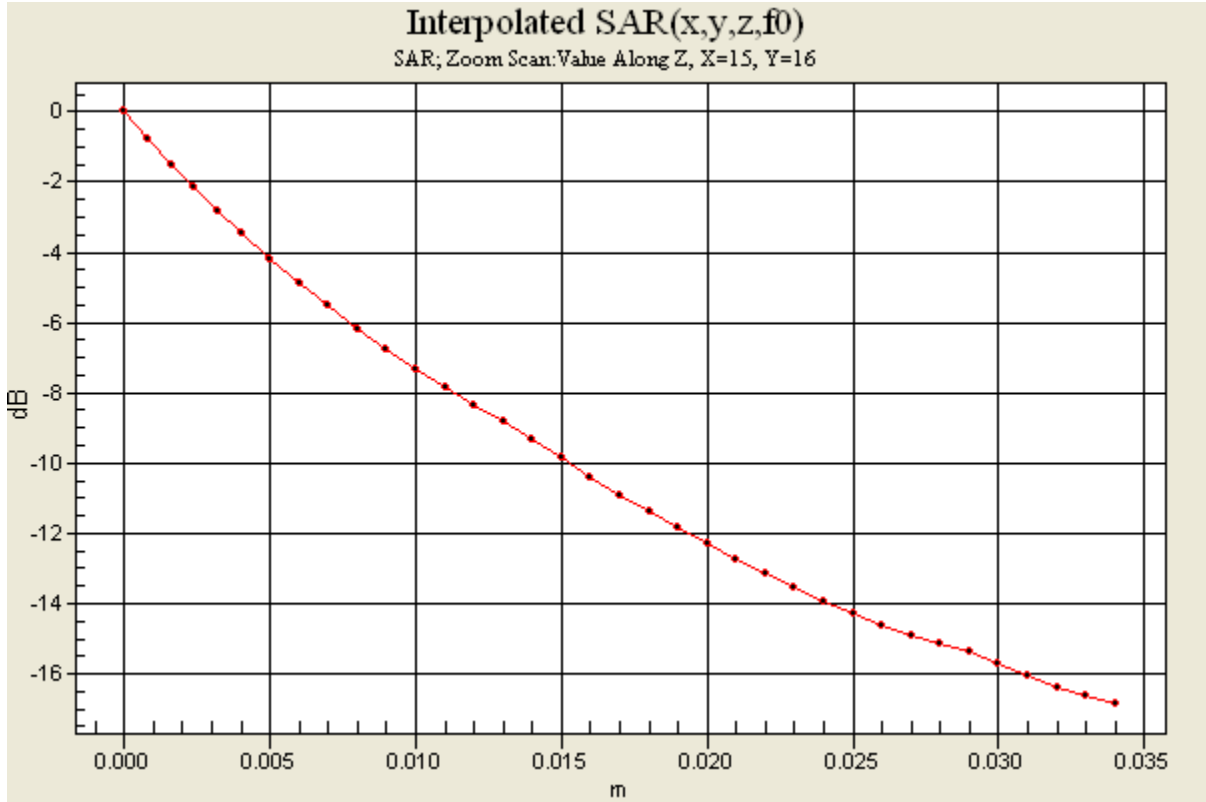
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.117mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

**WLAN: Distribution and Extrapolation of Maximum SAR
Model: AINO with Standard Battery: BST-33, Right Tilt Position.**

Date/Time: 7/15/2009 10:06:20 AM

File Name: [15July09_Aino_WLAN2450_2613_RCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-38 Humidity: 43.3 % Ambient Temp: 21.8 C Simulant Temp: 22 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.127 mW/g

High FCC channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.21 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.183 W/kg

SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.037 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.083 mW/g

High FCC channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

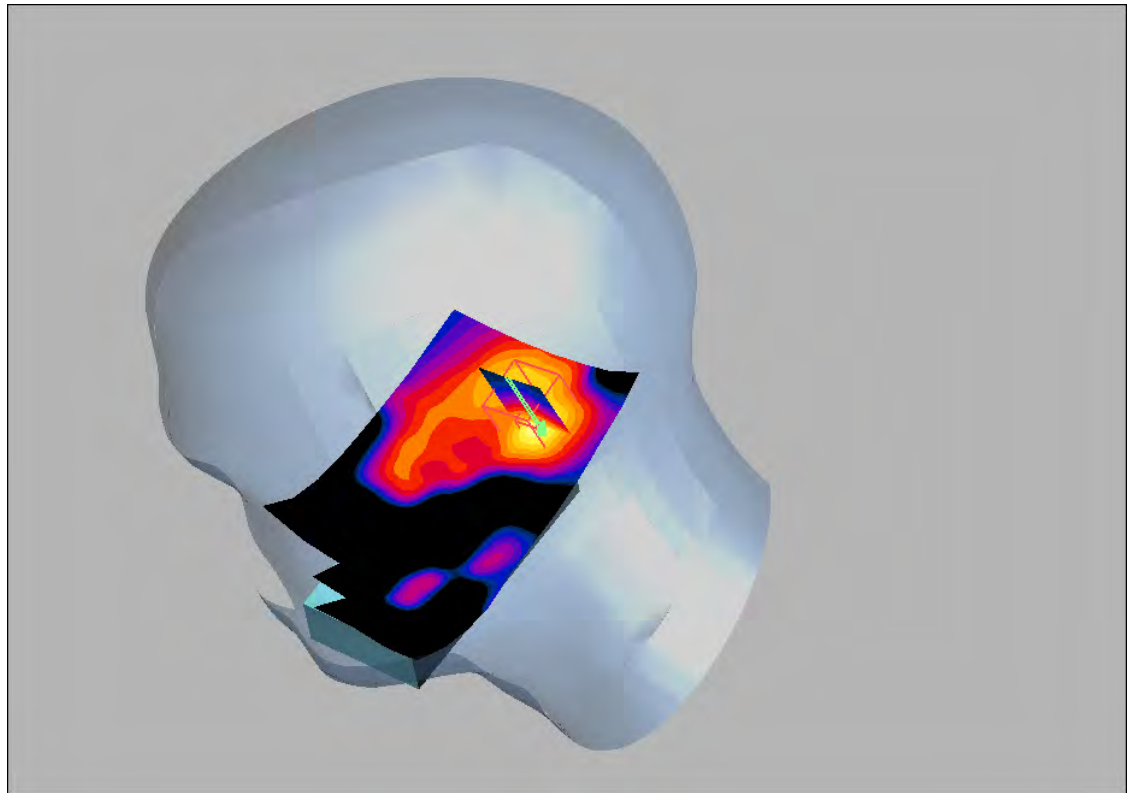
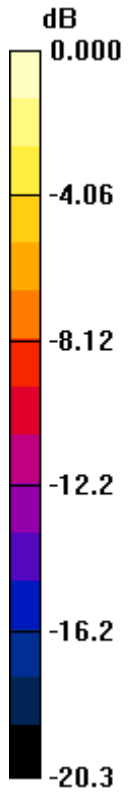
Reference Value = 4.21 V/m; Power Drift = 0.022 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.183 mW/g



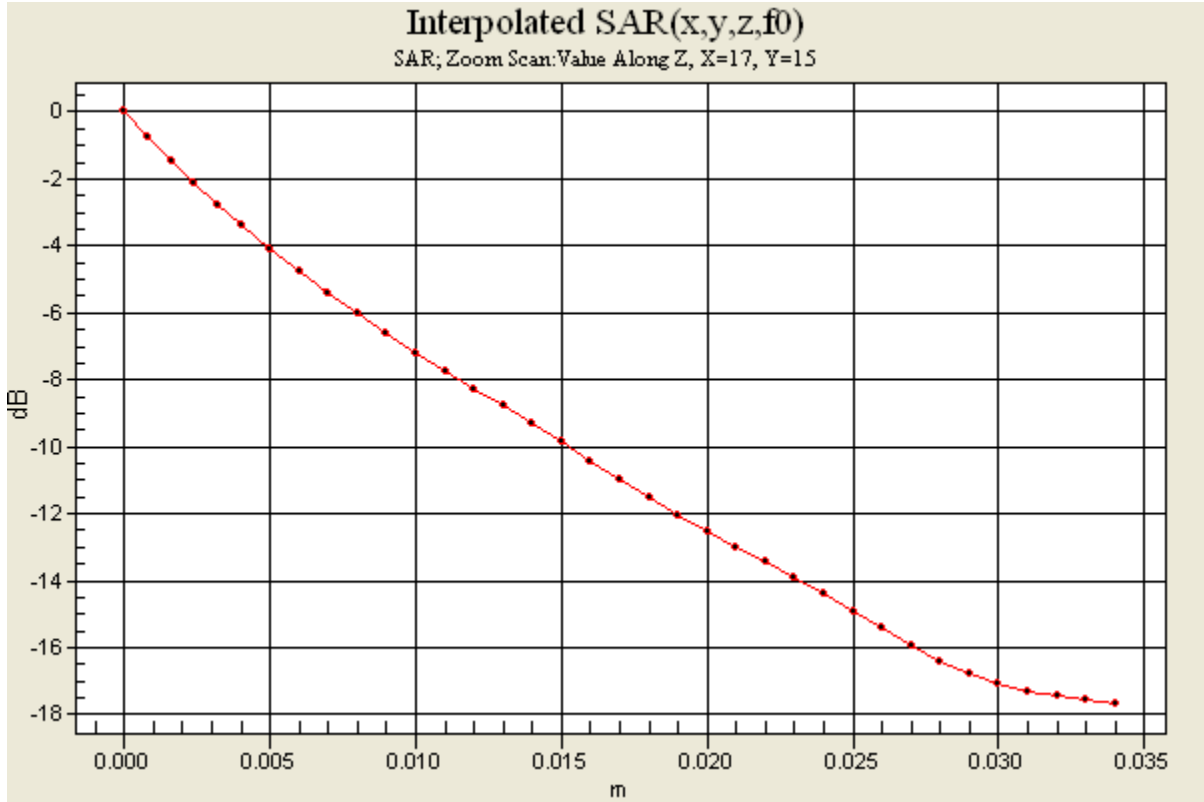
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.183mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

WLAN: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Check Position.

Date/Time: 7/15/2009 2:26:04 PM

File Name: [15July09_Aino_WLAN2450_2613_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 41.4 % Ambient Temp: 23.4 C Simulant Temp: 23.2 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel check/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.106 mW/g

High FCC channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.67 V/m; Power Drift = -0.115 dB

Peak SAR (extrapolated) = 0.263 W/kg

SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.048 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.106 mW/g

High FCC channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

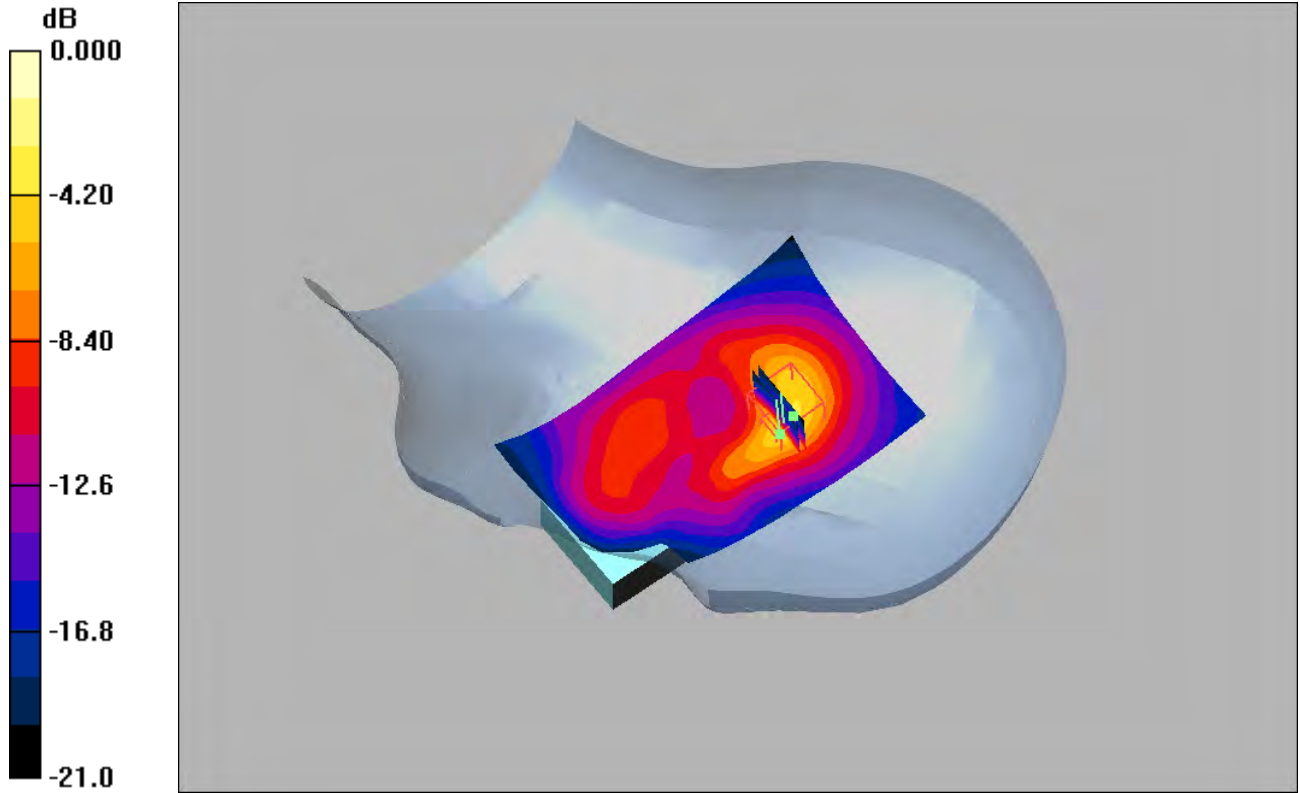
Reference Value = 5.67 V/m; Power Drift = -0.115 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.263 mW/g



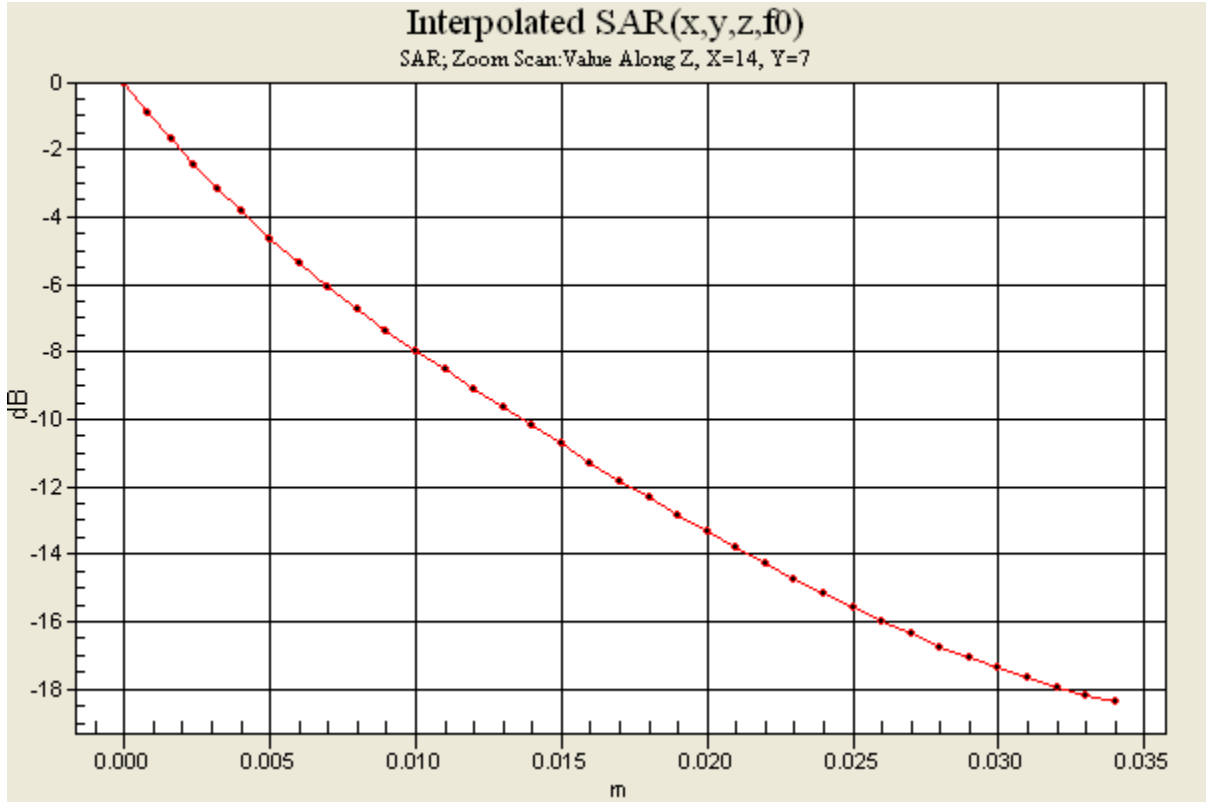
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	



0 dB = 0.263mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

**WLAN: Distribution and Extrapolation of Maximum SAR
Model: AINO with Standard Battery: BST-33, Left Tilt Position.**

Date/Time: 7/15/2009 2:02:56 PM

File Name: [15July09_Aino_WLAN2450_2613_LCT01.da4](#)

DUT: Aino

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 41.4 % Ambient Temp: 23.4 C Simulant Temp: 23.2 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.103 mW/g

High FCC channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.76 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.253 W/kg

SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.048 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.107 mW/g

High FCC channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

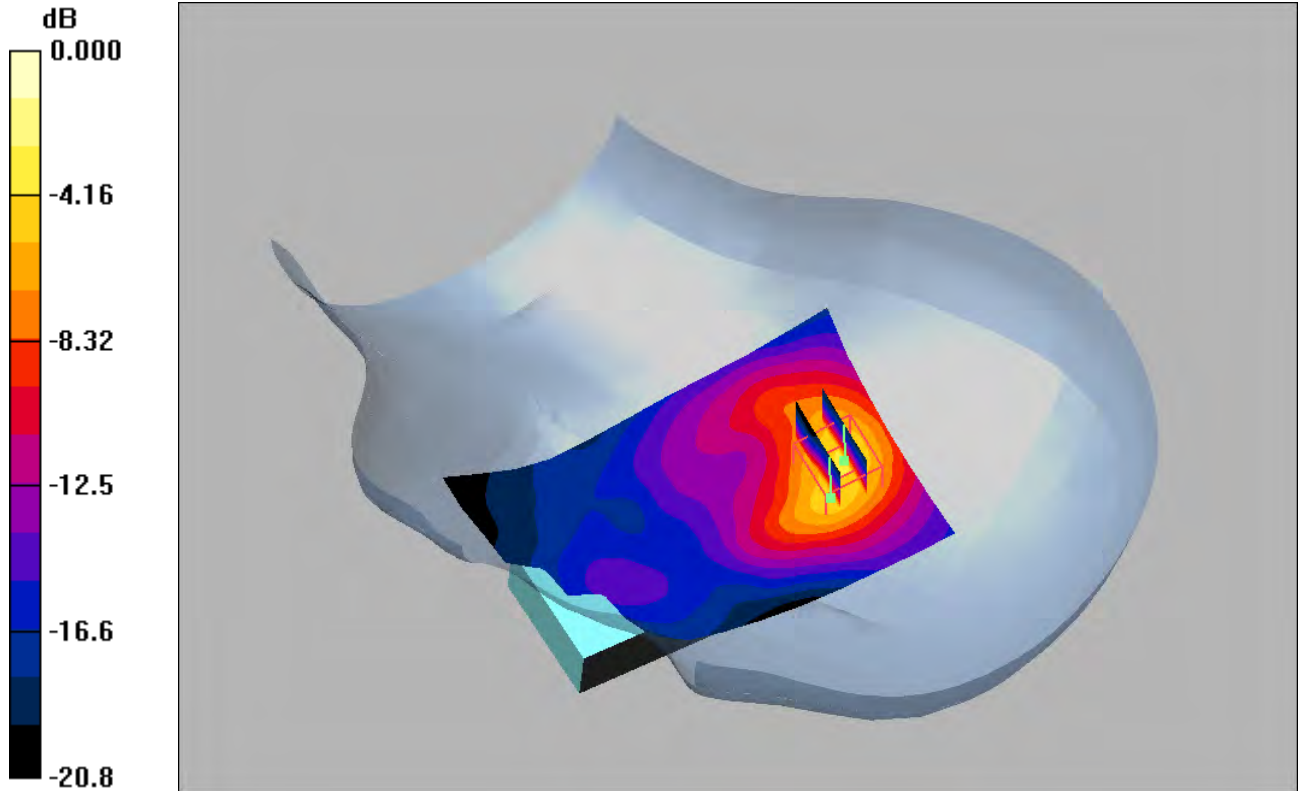
Reference Value = 5.76 V/m; Power Drift = 0.047 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.253 mW/g



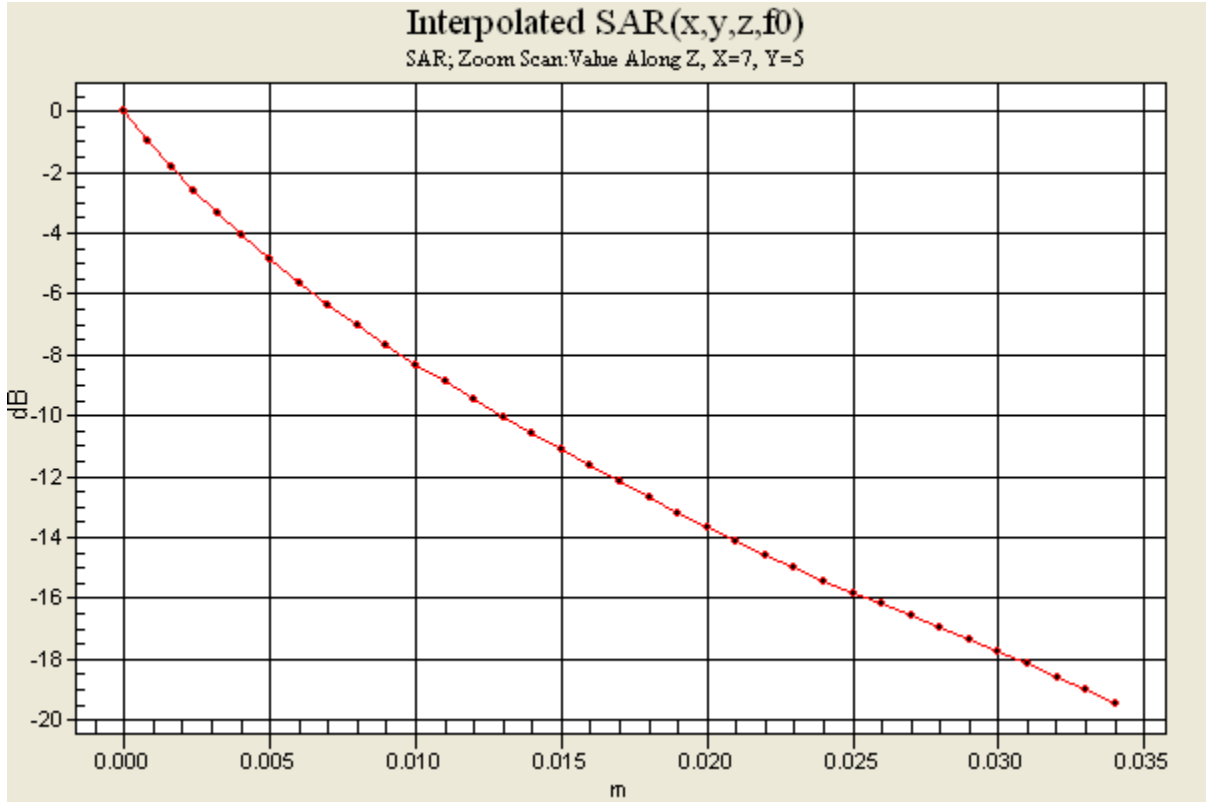
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.253mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

WLAN: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Check open Position.

Date/Time: 7/16/2009 1:49:31 PM

File Name: [16July09_Aino_WLAN2450_2613_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462 \text{ MHz}$; $\sigma = 1.9 \text{ mho/m}$; $\epsilon_r = 38.9$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DAS4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.7 % Ambient Temp: 23.7 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel check/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.033 mW/g

High FCC channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.58 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.084 W/kg

SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.017 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.034 mW/g

High FCC channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

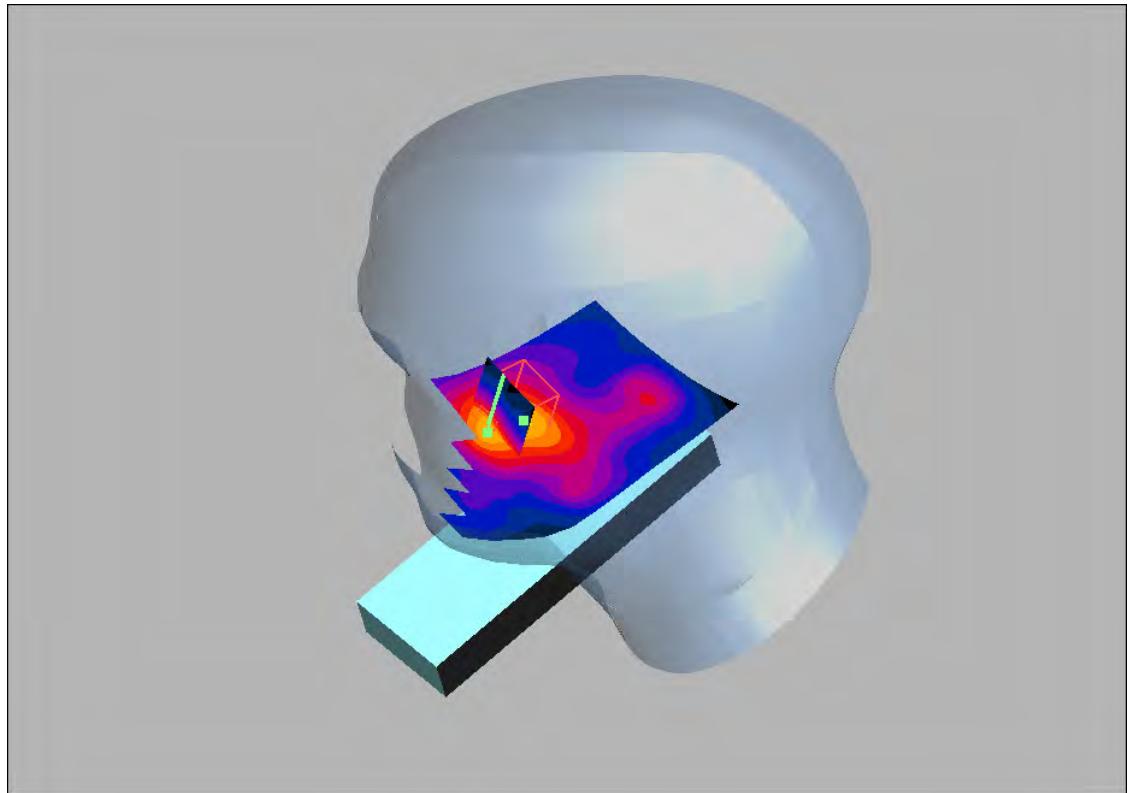
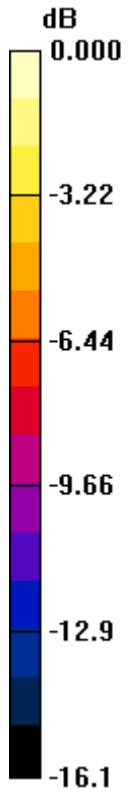
Reference Value = 2.58 V/m; Power Drift = 0.025 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.084 mW/g



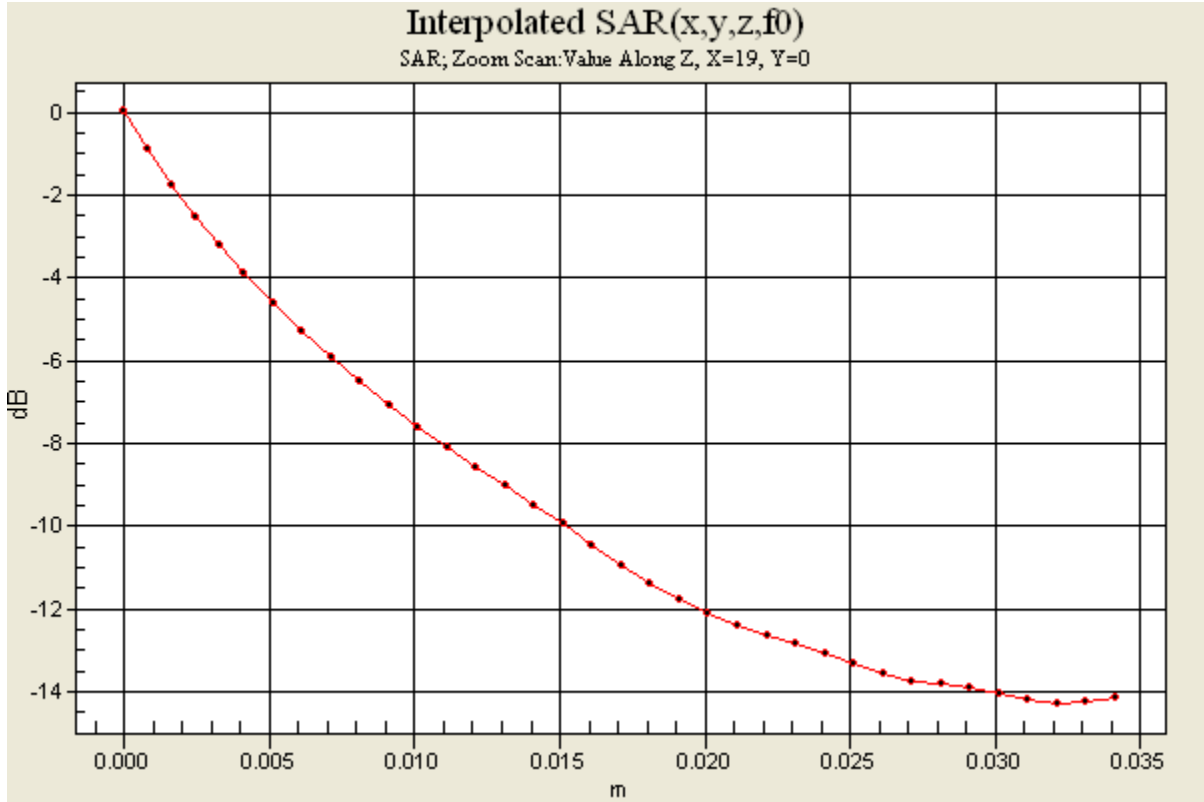
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.084mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

WLAN: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Right Tilt open Position.

Date/Time: 7/16/2009 2:16:49 PM

File Name: [16July09_Aino_WLAN2450_2613_open_RCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Right Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.7 % Ambient Temp: 23.7 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.030 mW/g

High FCC channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.63 V/m; Power Drift = 0.098 dB

Peak SAR (extrapolated) = 0.068 W/kg

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.013 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.030 mW/g

High FCC channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

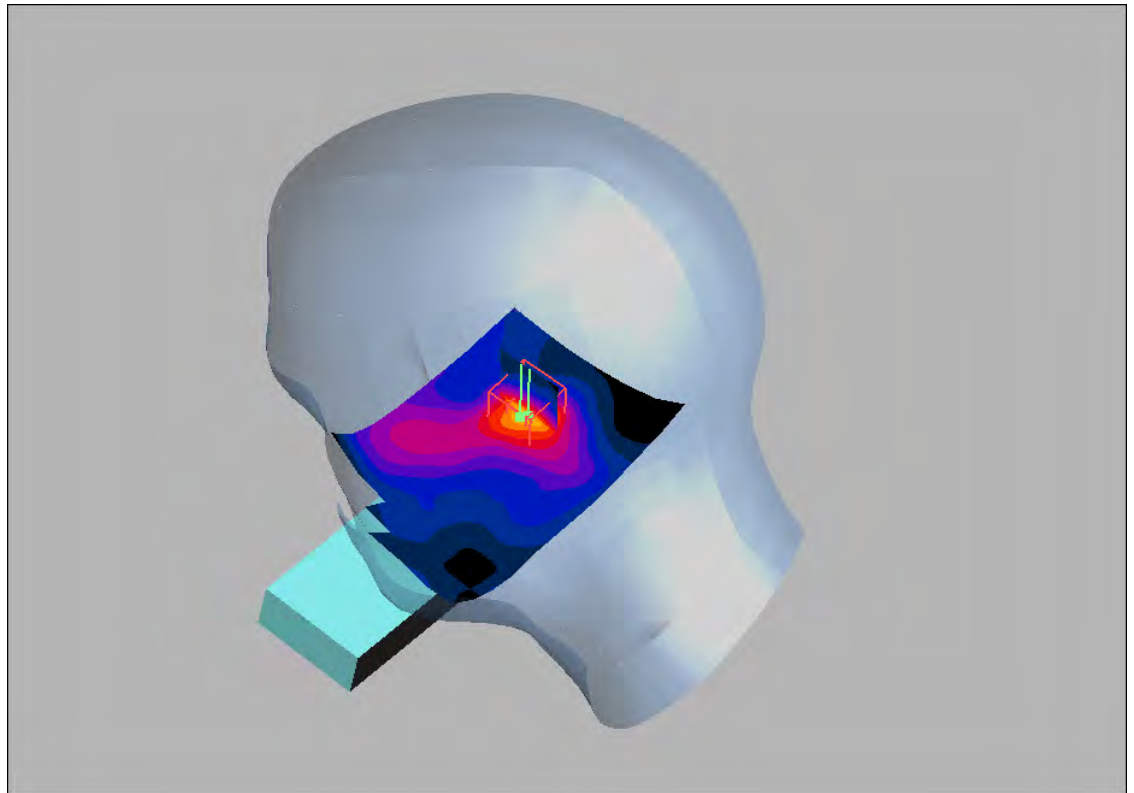
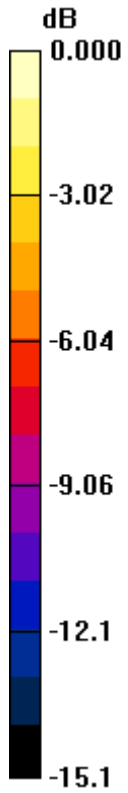
Reference Value = 3.63 V/m; Power Drift = 0.098 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.068 mW/g



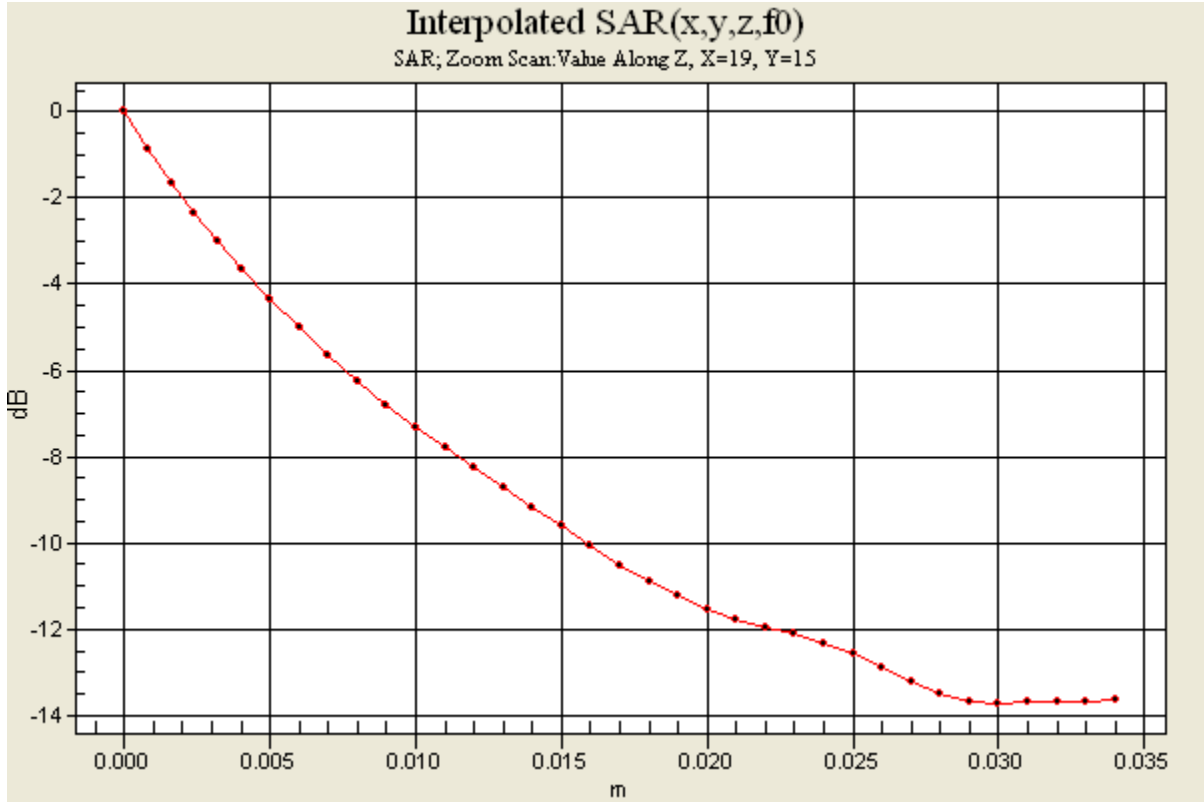
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.068mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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WLAN: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Check open Position.

Date/Time: 7/16/2009 9:55:13 AM

File Name: [16July09_Aino_WLAN2450_2613_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.7 % Ambient Temp: 23.7 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel check/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.050 mW/g

High FCC channel check/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.95 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.109 W/kg

SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.023 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.049 mW/g

High FCC channel check/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

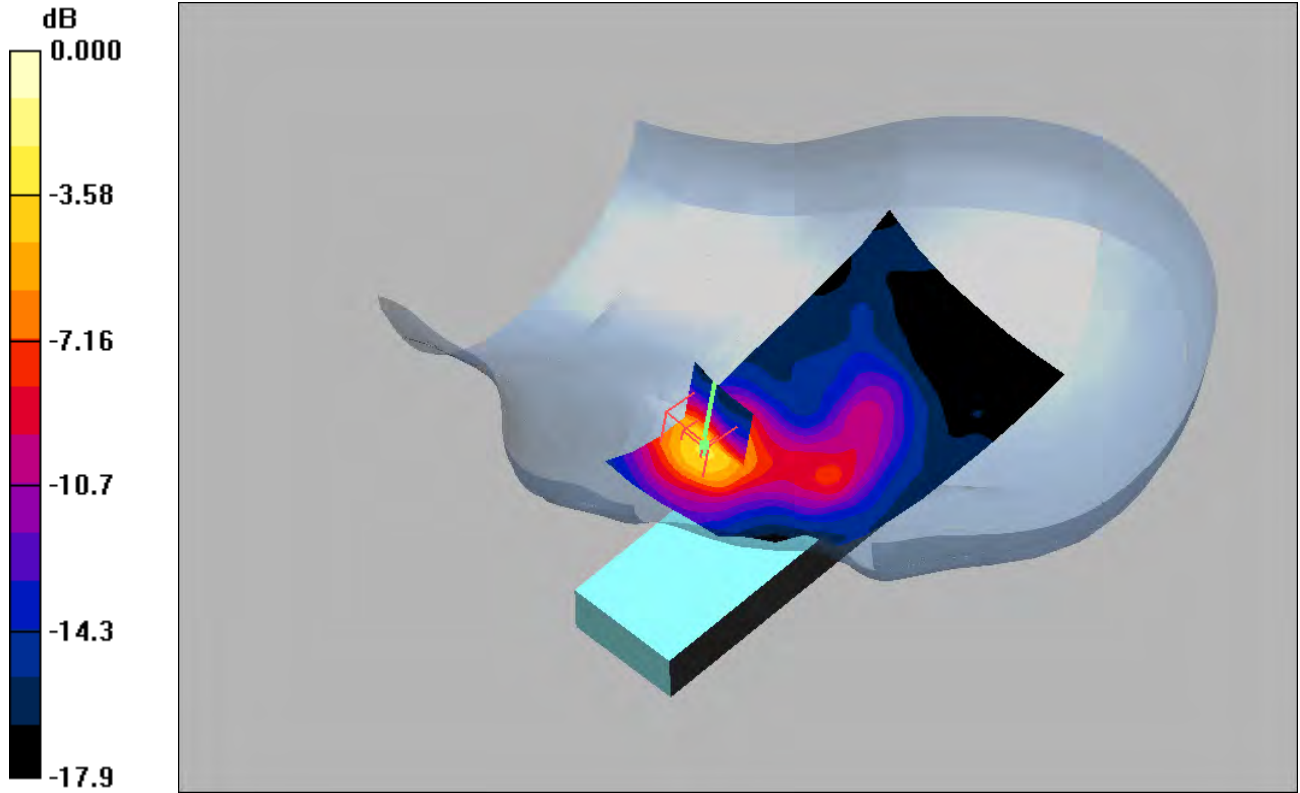
Reference Value = 1.95 V/m; Power Drift = -0.099 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.109 mW/g



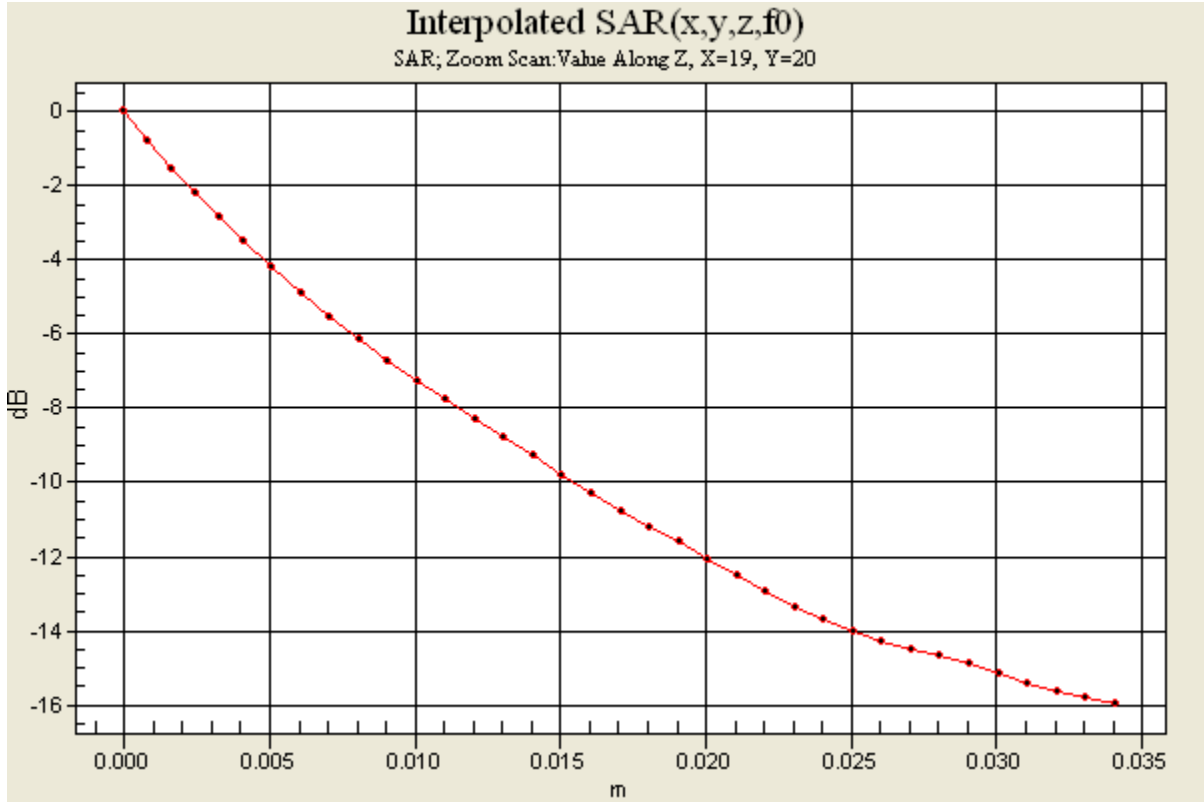
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0 dB = 0.109mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A

WLAN: Distribution and Extrapolation of Maximum SAR

Model: AINO with Standard Battery: BST-33, Left Tilt open Position.

Date/Time: 7/16/2009 10:18:37 AM

File Name: [16July09_Aino_WLAN2450_2613_open_LCT01.da4](#)

DUT: Aino open

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Left Section

Probe: ET3DV6 - SN1584 ConvF(4.51, 4.51, 4.51)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.7 % Ambient Temp: 23.7 C Simulant Temp: 23.6 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.025 mW/g

High FCC channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.34 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 0.051 W/kg

SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.011 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.024 mW/g

High FCC channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

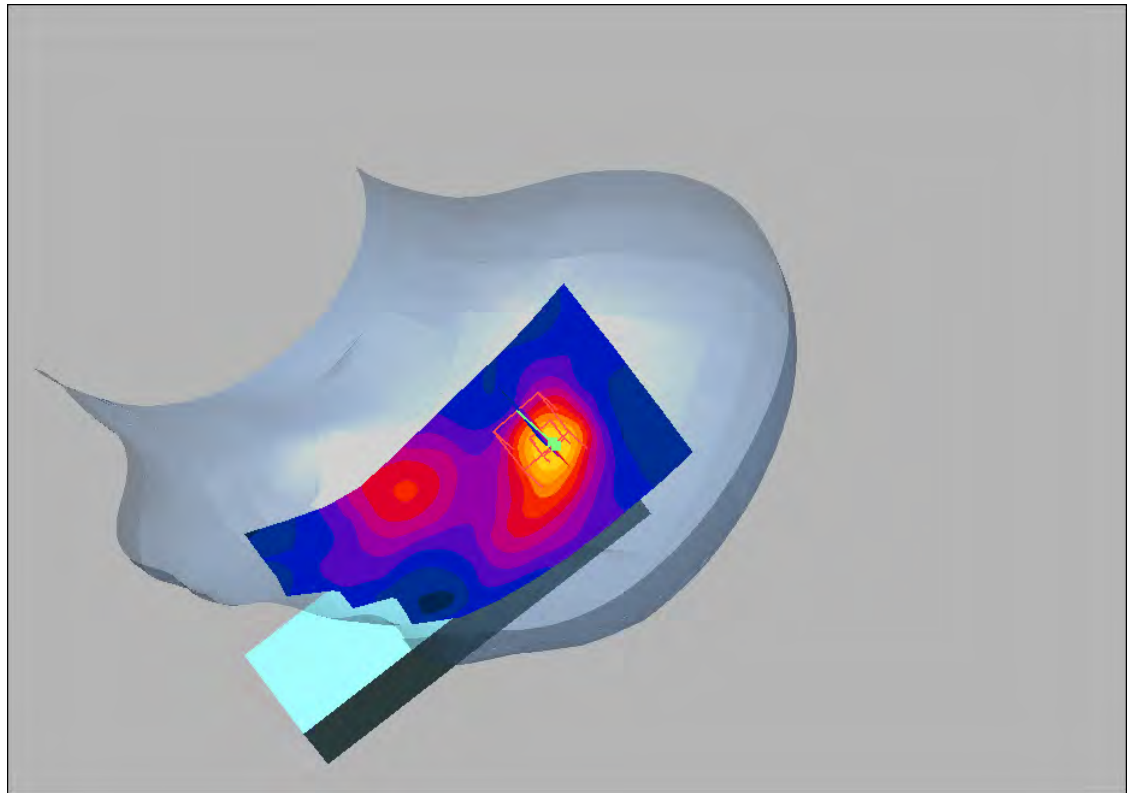
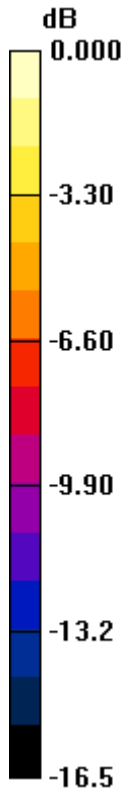
Reference Value = 3.34 V/m; Power Drift = 0.031 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.051 mW/g



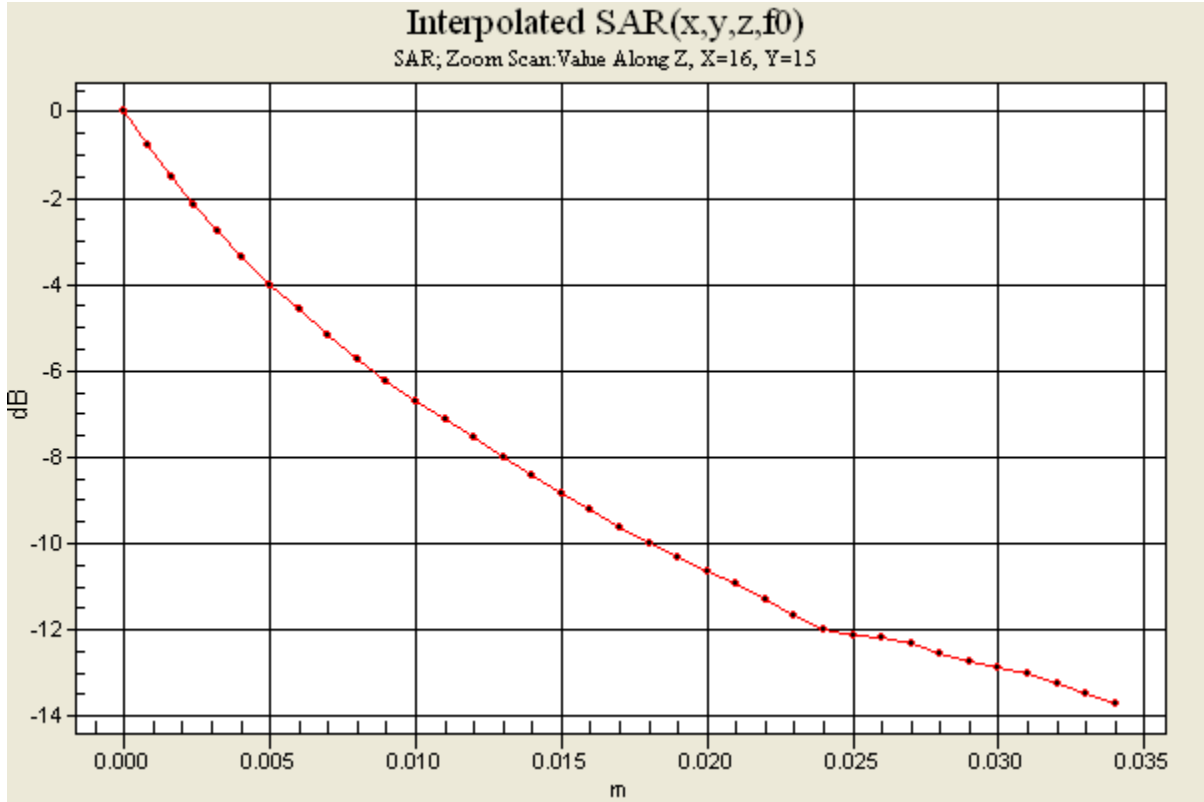
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.051mW/g



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Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

Appendix 3

SAR distribution plots for Body Worn Configuration



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-33)

Date/Time: 6/17/2009 6:42:32 PM

File Name: [17June09_Aino_GSM835_25YJ_15mm_BBF01.da4](#)

DUT: Aino body

Phantom: SAM with CRP (Low Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(5.53, 5.53, 5.53)

Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 56$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 42.7 % Ambient Temp - 23.6 C Simulant Temp - 23.3 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.53, 5.53, 5.53); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn415; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.885 mW/g

High channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.8 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.832 mW/g; SAR(10 g) = 0.587 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.889 mW/g

High channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

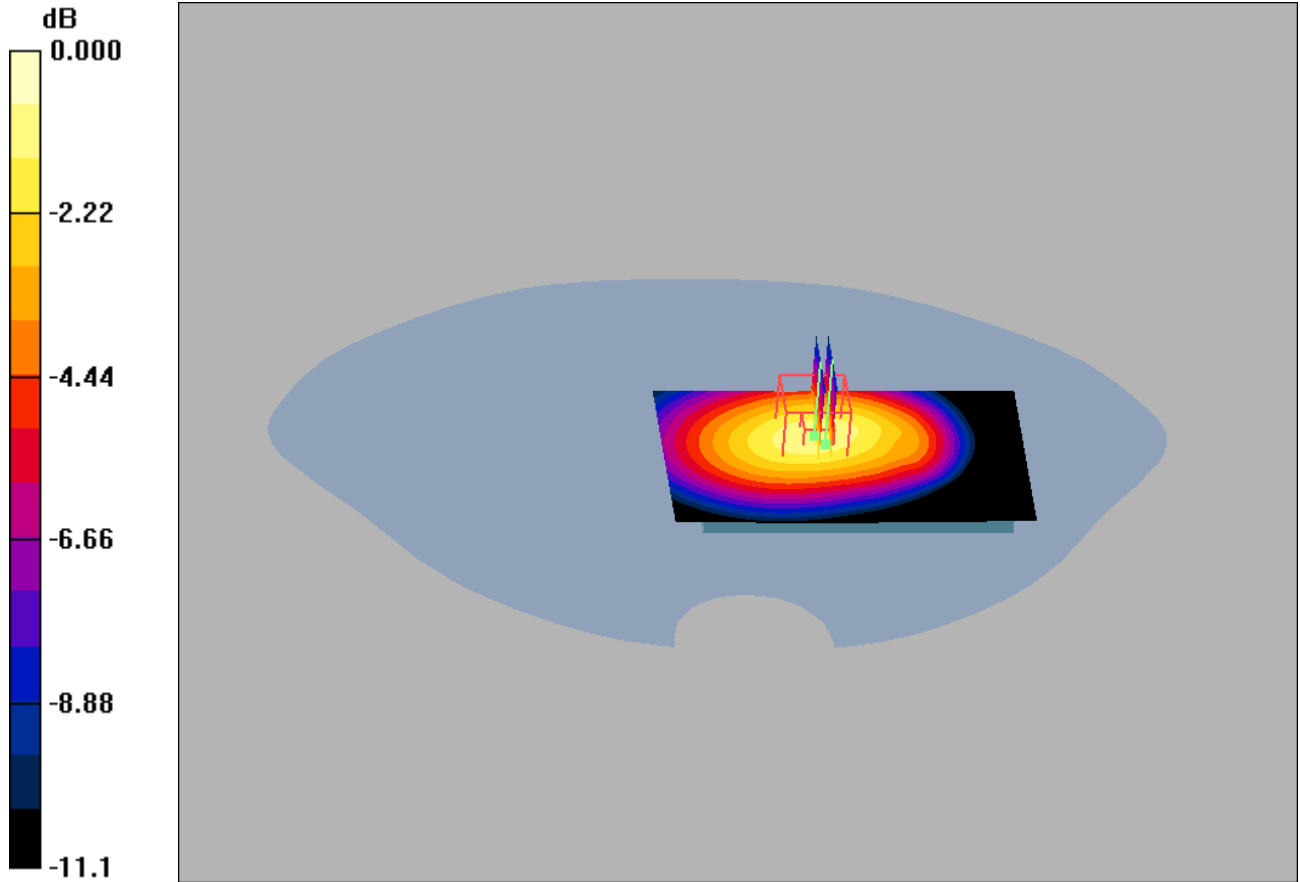
Reference Value = 23.8 V/m; Power Drift = -0.060 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.09 mW/g



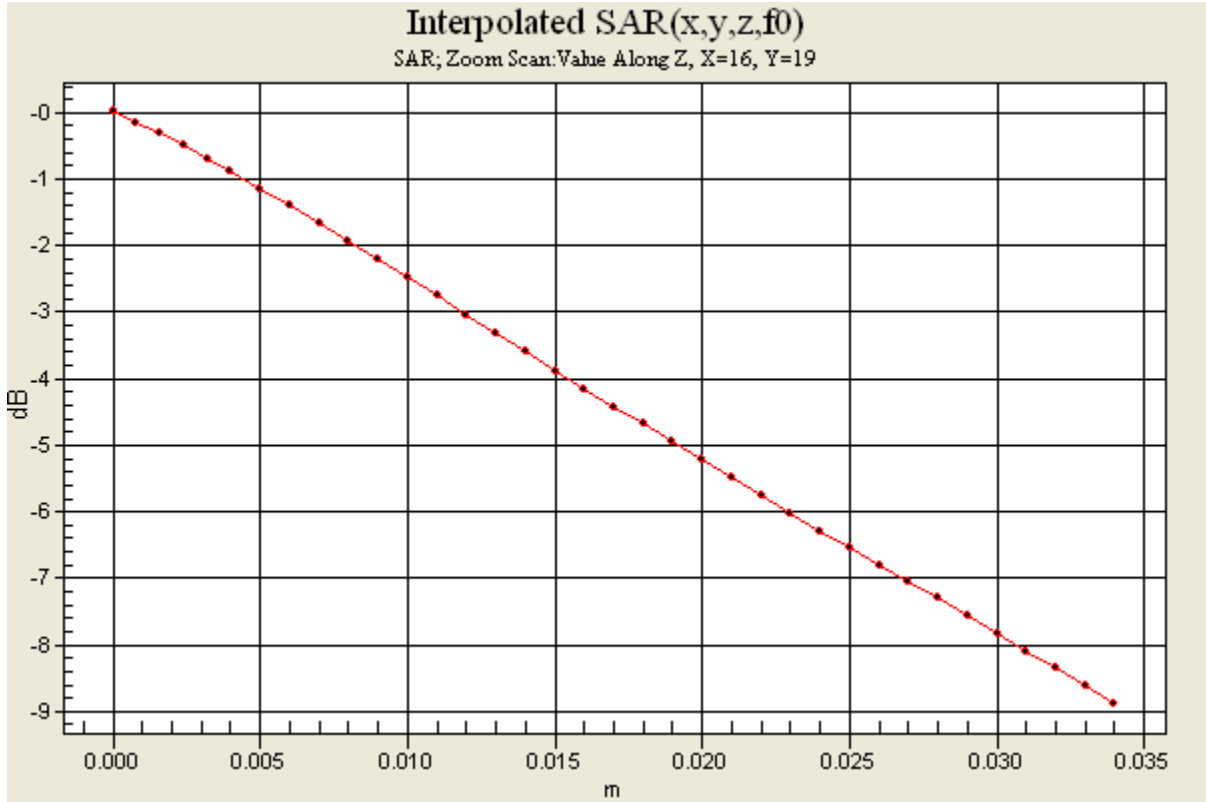
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 1.09mW/g



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-33)

Date/Time: 6/16/2009 6:50:12 PM

File Name: [16June09_Aino_GSM1900_25ZM_15mm_BBF01.da4](#)

DUT: Aino body

Phantom: SAM with CRP (High Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(4.21, 4.21, 4.21)

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST38 Humidity - 42.1 % Ambient Temp - 22.1 C Simulant Temp - 21.7 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.21, 4.21, 4.21); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn415; Calibrated: 10/31/2008

- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.673 mW/g

High channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.599 mW/g; SAR(10 g) = 0.355 mW/g

Maximum value of SAR (measured) = 0.646 mW/g

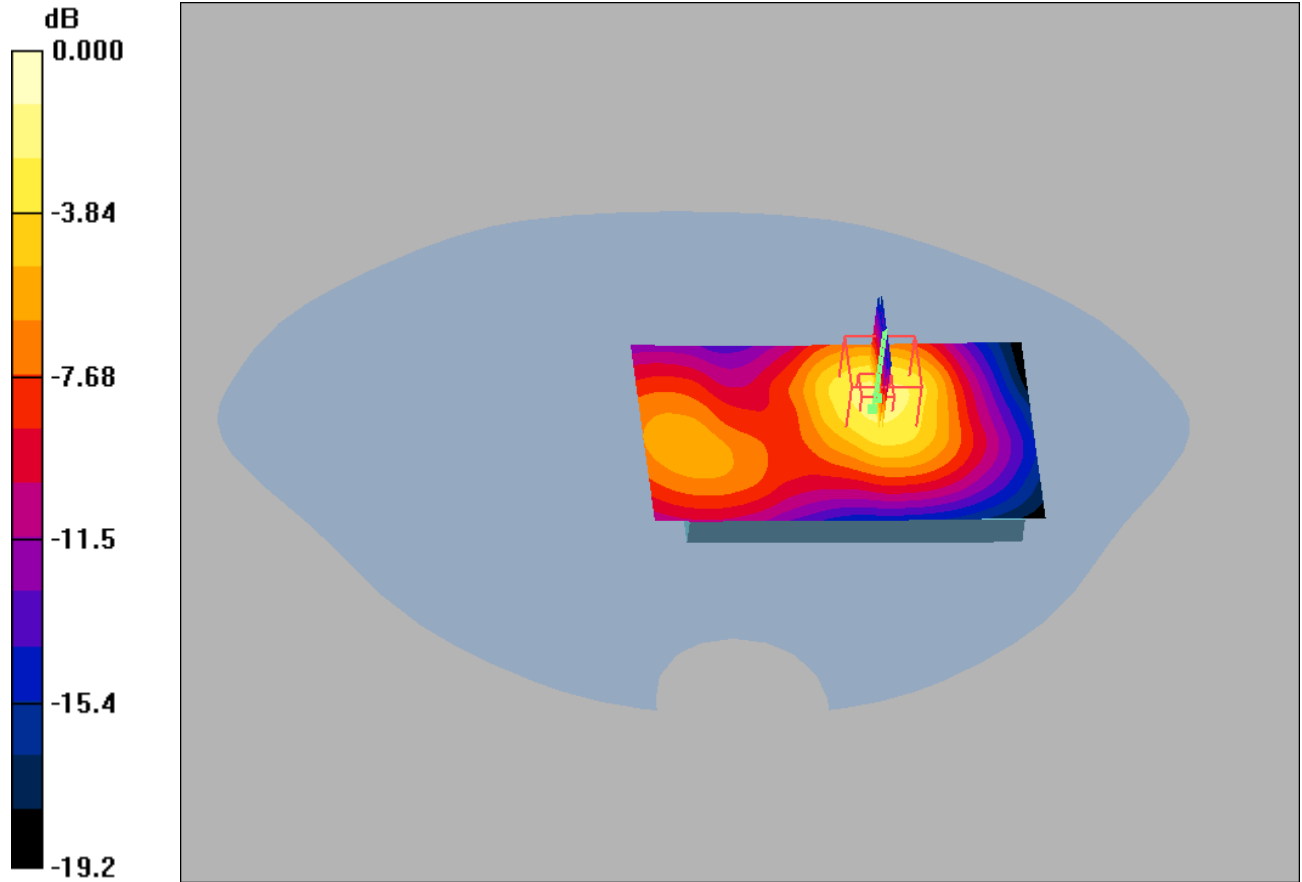
High channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = 0.025 dB

Maximum value of SAR (interpolated) = 1.04 mW/g



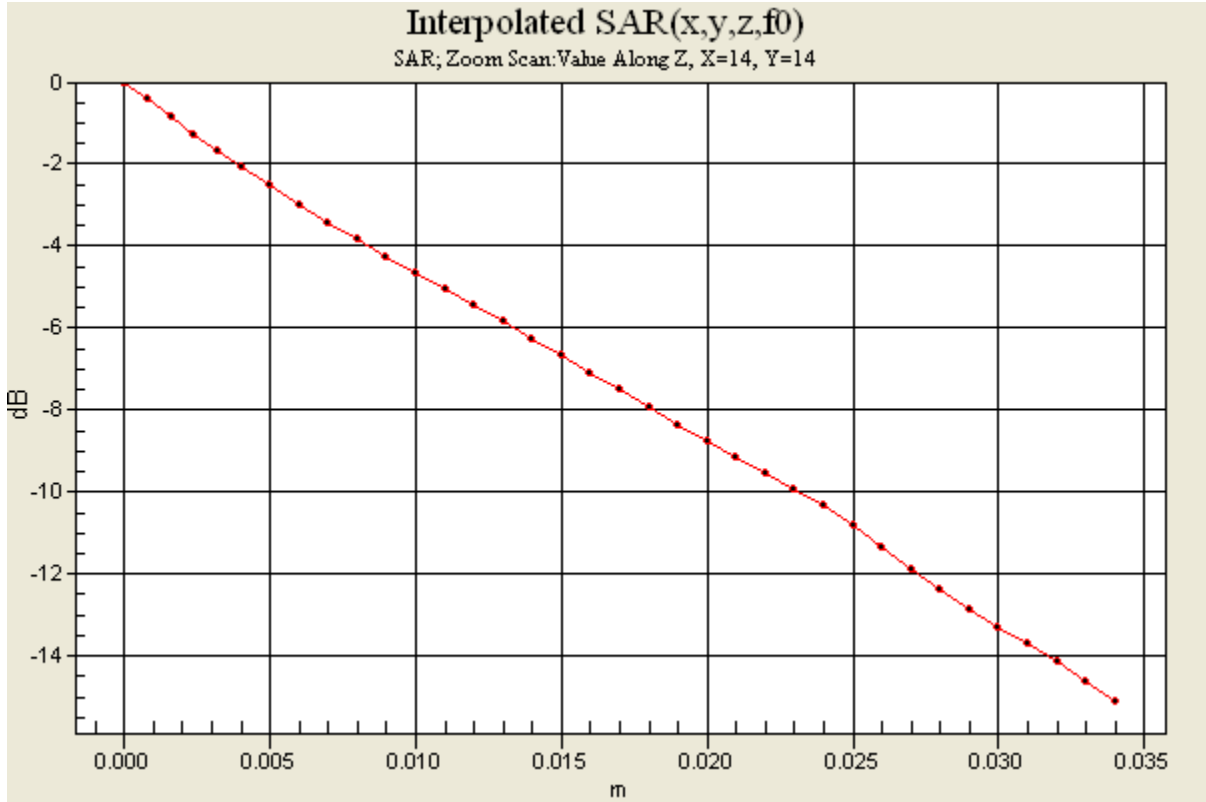
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	



0 dB = 1.04mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

Distribution of maximum SAR in UMTS Band V (850MHz). Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-33)

Date/Time: 7/13/2009 8:51:22 AM

File Name: [13July09_Aino_B5WCDMA_25YB_15mm_BBF01.da4](#)

DUT: Aino body

Phantom: SAM with CRP (Low Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(5.53, 5.53, 5.53)

Medium parameters used (interpolated): $f = 826.6 \text{ MHz}$; $\sigma = 0.958 \text{ mho/m}$; $\epsilon_r = 56.2$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 42.9 % Ambient Temp - 23.4 C Simulant Temp - 23 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.53, 5.53, 5.53); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn415; Calibrated: 10/31/2008

- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.606 mW/g

Low channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.7 V/m; Power Drift = 0.087 dB

Peak SAR (extrapolated) = 0.850 W/kg

SAR(1 g) = 0.618 mW/g; SAR(10 g) = 0.424 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.667 mW/g

Low channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

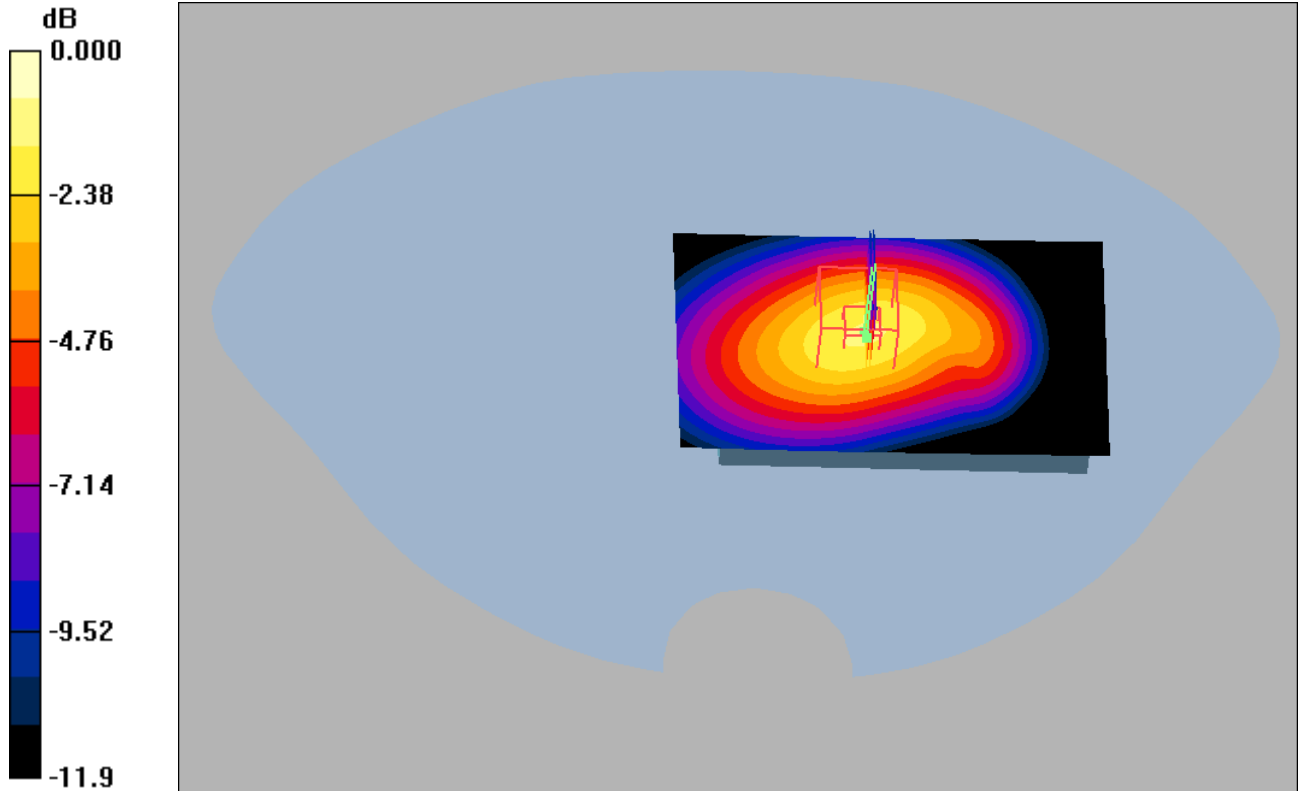
Reference Value = 19.7 V/m; Power Drift = 0.087 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.850 mW/g



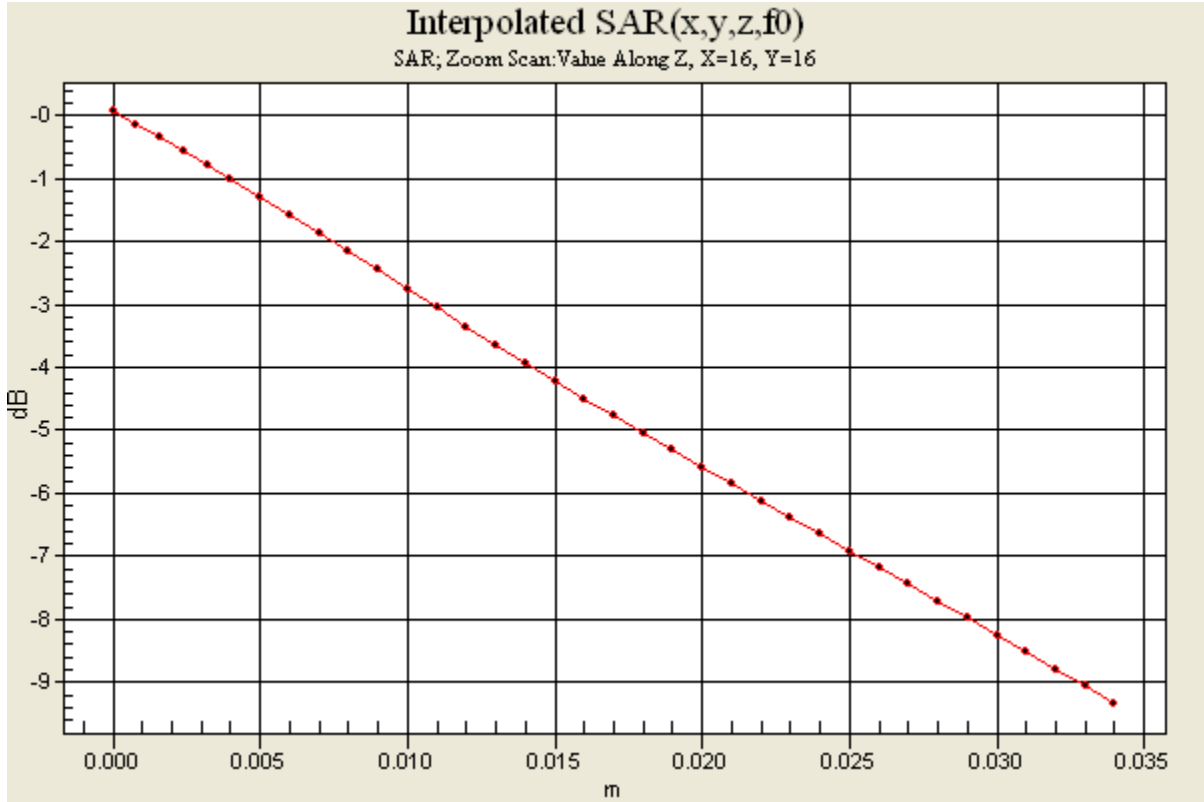
Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
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0 dB = 0.850mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	





Prepared (also subject responsible if other) SEM/CV/PF/P Rodney Dixon		No. REP 2009 004 AINO 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	

Distribution of maximum SAR in UMTS Band II (1900 MHz). Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-33)

Date/Time: 7/14/2009 10:18:53 AM

File Name: [14July09_Aino_B2WCDMA_25ZM_15mm_BBF01.da4](#)

DUT: Aino body

Phantom: SAM with CRP (High Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539 ConvF(4.21, 4.21, 4.21)

Medium parameters used (interpolated): $f = 1907.4$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 50.9$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery - BST33 Humidity - 40.5 % Ambient Temp - 23.2 C Simulant Temp - 23 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.21, 4.21, 4.21); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn415; Calibrated: 10/31/2008

- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.566 mW/g

High channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.6 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.855 W/kg

SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.294 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.528 mW/g

High channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

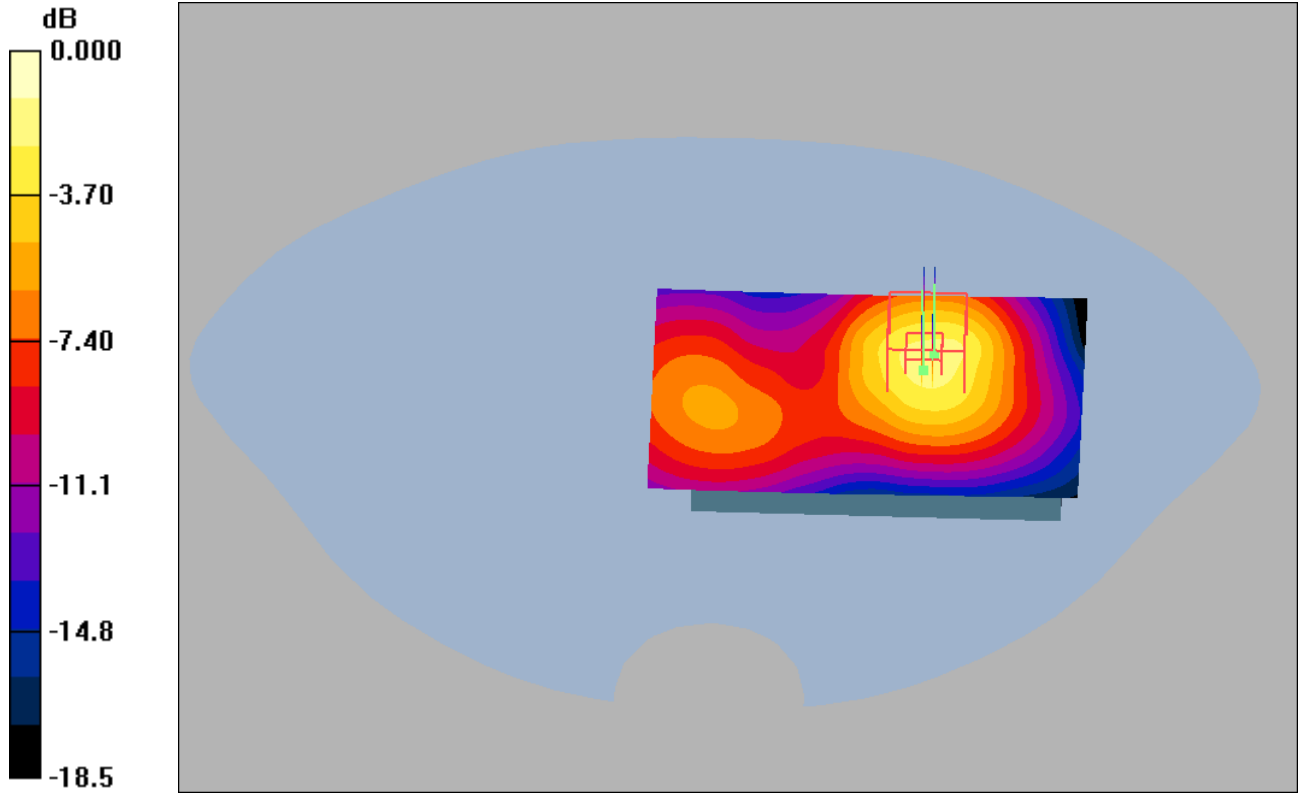
Reference Value = 12.6 V/m; Power Drift = -0.046 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.855 mW/g



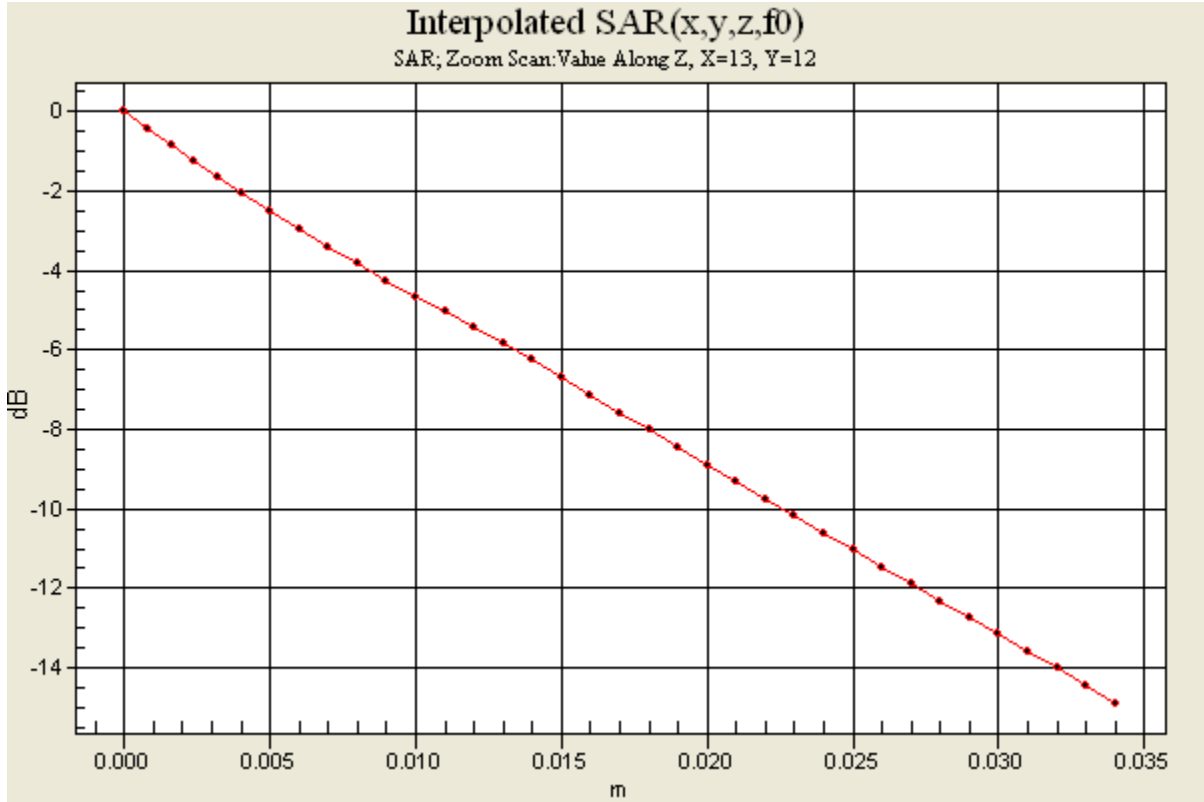
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0 dB = 0.855mW/g



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Distribution of maximum SAR in WLAN. Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-33)

Date/Time: 7/14/2009 12:30:02 PM

File Name: [14July09_Aino_WLAN2450_2613_15mm_BBF01.da4](#)

DUT: Aino body

Phantom: SAM with CRP (WLAN right phantom) Phantom section: Flat Section

Probe: ET3DV6 - SN1584 ConvF(3.9, 3.9, 3.9)

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Program Notes: Battery BST-33 Humidity: 40.5 % Ambient Temp: 23.2 C Simulant Temp: 23 C

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(3.9, 3.9, 3.9); Calibrated: 11/17/2008

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn417; Calibrated: 11/7/2008

- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High FCC channel back/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.121 mW/g

High FCC channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.68 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.266 W/kg

SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.064 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.118 mW/g

High FCC channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

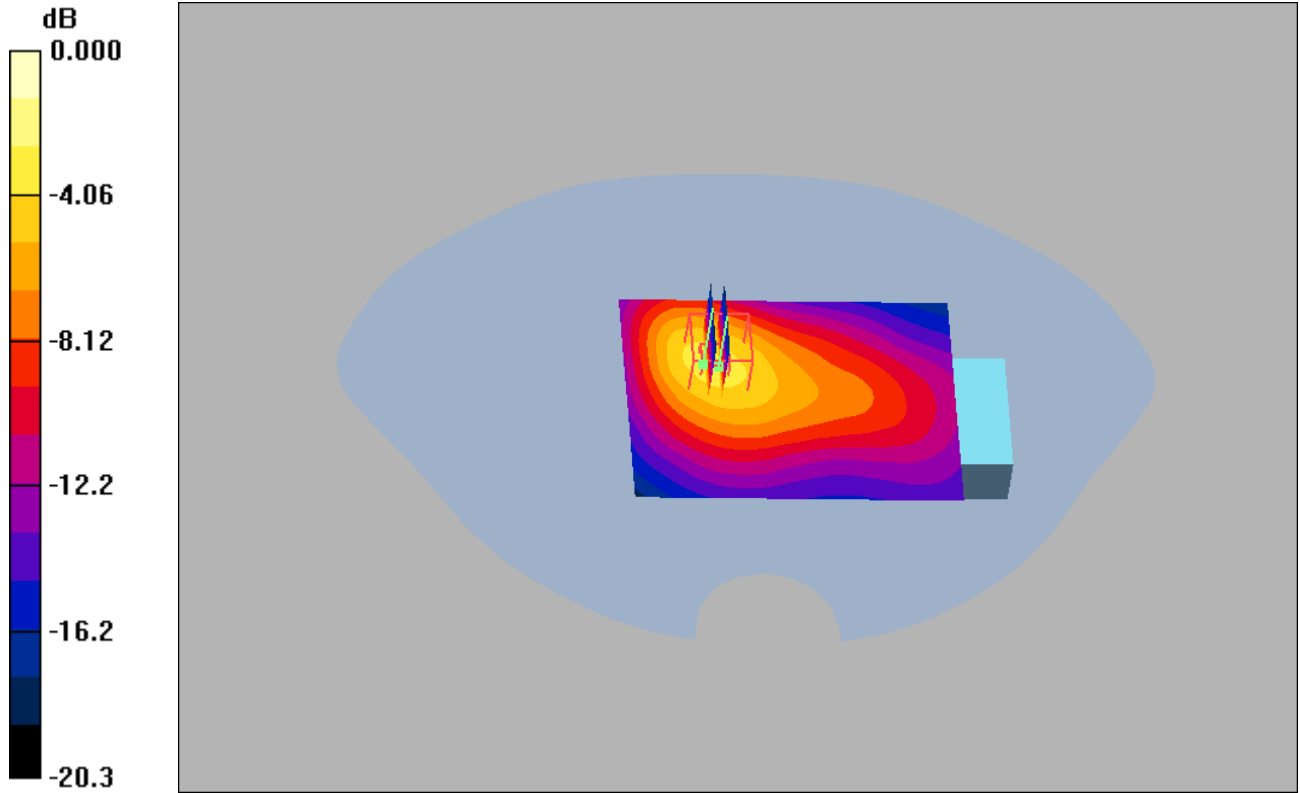
Reference Value = 6.68 V/m; Power Drift = 0.101 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.266 mW/g



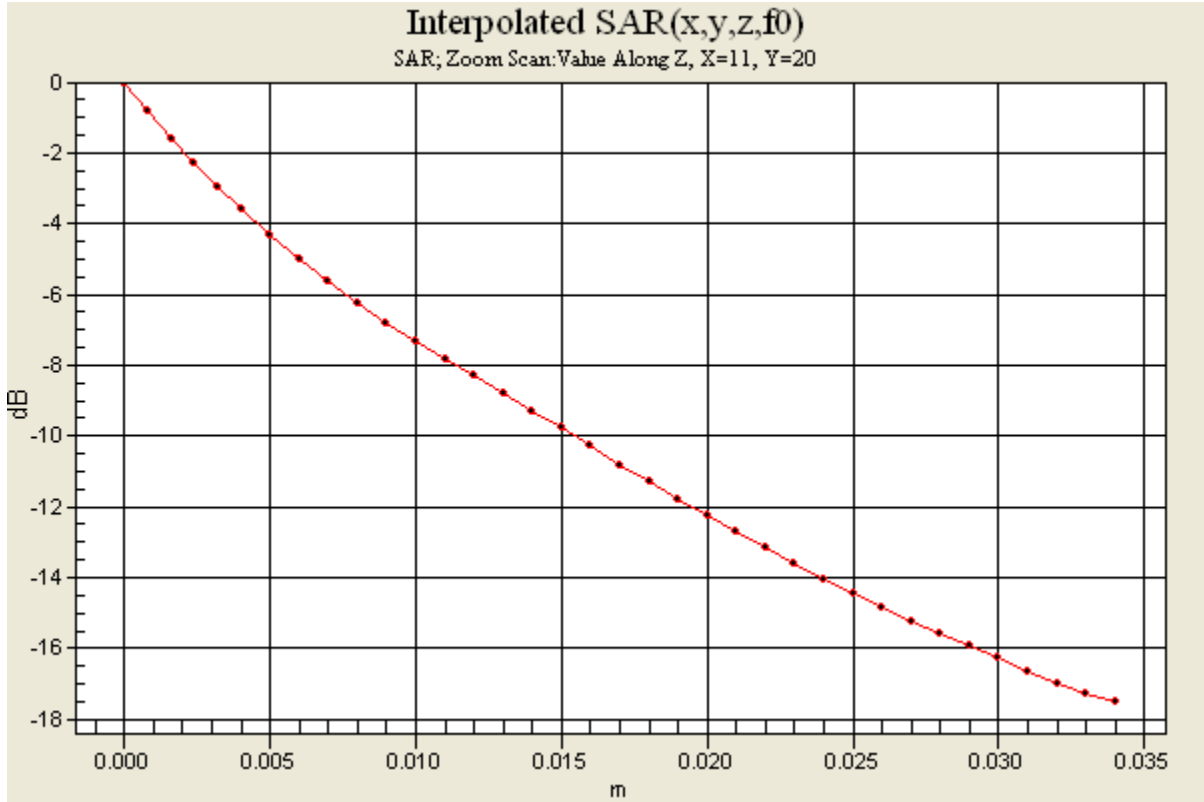
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0 dB = 0.266mW/g



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Appendix 4

Probe Calibration Certificates

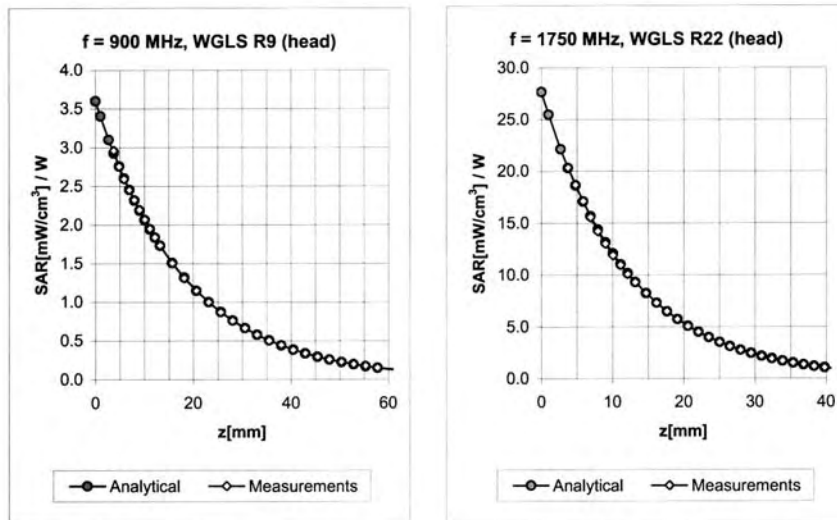


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ET3DV6 SN:1539

November 17, 2008

Conversion Factor Assessment



f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.29	3.10	5.71 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.30	3.22	5.57 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.99	1.73	4.90 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.99	1.72	4.65 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.99	1.42	4.27 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.33	3.02	5.53 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.32	3.42	5.34 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.99	1.99	4.56 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.99	1.73	4.21 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	1.46	3.76 ± 11.0% (k=2)

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.



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ET3DV6 SN:1584

November 17, 2008

DASY - Parameters of Probe: ET3DV6 SN:1584

Sensitivity in Free Space^A

Diode Compression^B

NormX	1.89 ± 10.1%	μV/(V/m) ²	DCP X	93 mV
NormY	1.81 ± 10.1%	μV/(V/m) ²	DCP Y	94 mV
NormZ	1.90 ± 10.1%	μV/(V/m) ²	DCP Z	94 mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL 900 MHz Typical SAR gradient: 5 % per mm

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR _{be} [%]	Without Correction Algorithm	9.9	5.9
SAR _{be} [%]	With Correction Algorithm	0.8	0.6

TSL 1750 MHz Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR _{be} [%]	Without Correction Algorithm	10.7	6.6
SAR _{be} [%]	With Correction Algorithm	0.8	0.5

Sensor Offset

Probe Tip to Sensor Center 2.7 mm

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 8).

^B Numerical linearization parameter: uncertainty not required.

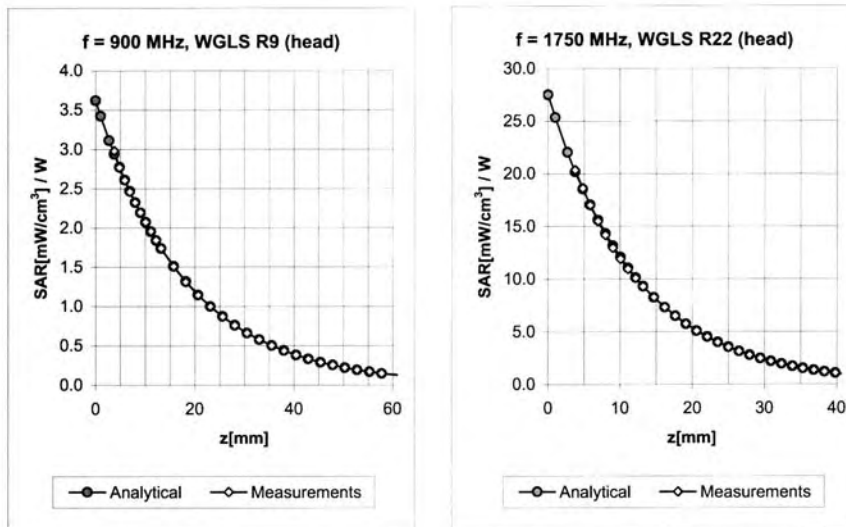


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ET3DV6 SN:1584

November 17, 2008

Conversion Factor Assessment



f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.19	4.09	6.34 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.23	3.46	6.18 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.89	1.84	5.36 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.99	1.66	5.10 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.99	1.27	4.51 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.23	3.72	6.14 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.30	2.92	6.03 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.99	1.88	4.78 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.99	1.77	4.46 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	1.35	3.90 ± 11.0% (k=2)

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

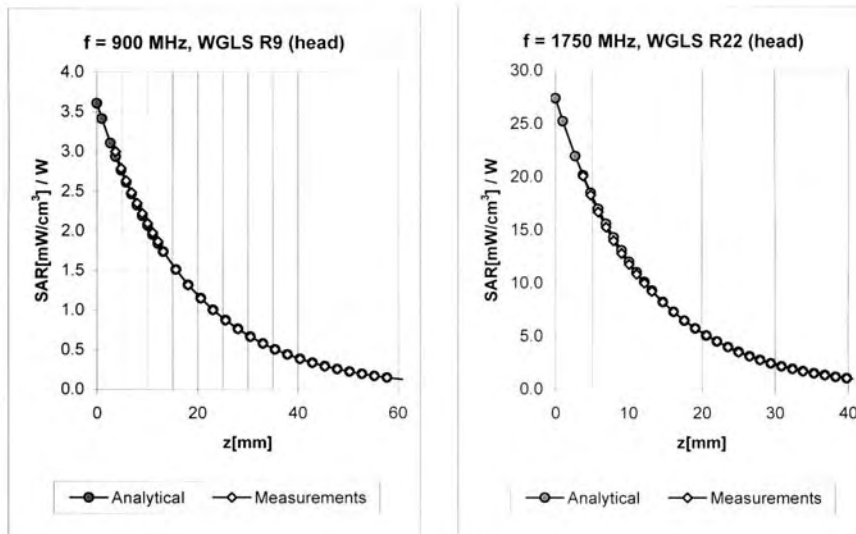


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ET3DV6 SN:1587

May 25, 2009

Conversion Factor Assessment



f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.44	2.15	6.39 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.22	3.75	6.16 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.50	2.60	5.49 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.45	2.95	5.23 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.50	2.30	4.58 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.34	2.60	6.27 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.34	2.69	6.11 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.60	2.60	4.90 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.83	2.48	4.58 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.35	2.00	3.99 ± 11.0% (k=2)

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.



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Appendix 5

Measurement Uncertainty Budget



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Table 1. Uncertainty Budget for System Performance Check (Dipole & flat phantom) DASY4 System

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	$e = f(d,k)$	<i>f</i>	<i>g</i>	$h = c \times f / e$	$i = c \times g / e$	<i>k</i>
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i (1-g)	c_i (10-g)	1-g u_i (±%)	10-g u_i (±%)	v_i
Measurement System									
Probe Calibration ($k=1$)	E2.1	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Axial Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Hemispherical Isotropy	E.2.2	1.0	R	1.73	1	1	0.6	0.6	∞
Boundary Effect	E.2.3	4.7	R	1.73	1	1	2.7	2.7	∞
Linearity	E.2.4	1.0	R	1.73	1	1	0.6	0.6	∞
System Detection Limits	E.2.5	1.0	N	1	1	1	1.0	1.0	∞
Readout Electronics	E.2.6	0.8	R	1.73	1	1	0.5	0.5	∞
Response Time	E.2.7	2.6	R	1.73	1	1	1.5	1.5	∞
Integration Time	E.2.8	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance (corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1	1	0.6	0.6	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	1.0	R	1.73	1	1	0.6	0.6	∞
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty - shell thickness tolerance	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.59	1.07	∞
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.29	1.54	∞



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Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.28	1.05	∞
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.11	1.72	∞
Combined Standard Uncertainty			RSS				9.37	9.03	
Expanded Uncertainty (95% C.L.)							18.74	18.05	



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Table 2: Uncertainty Budget for the Device Under Test with DASY4 System

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	$e = f(d,k)$	<i>f</i>	<i>g</i>	$h = c \times f / e$	$i = c \times g / e$	<i>k</i>
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i (1-g)	c_i (10-g)	1-g u_i (±%)	10-g u_i (±%)	v_i
Measurement System									
Probe Calibration (<i>k</i> =1)	E2.1	4.8	N	1	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1	1	1	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance (corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1	1	0.6	0.6	∞
Test sample Related									
Test Sample Positioning	E.4.2	2.7	N	1	1	1	4.0	4.0	4
Device Holder Uncertainty	E.4.1	1.3	R	1.73	1	1	0.7	0.7	4
Output Power Variation - SAR drift measurement (4)	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞



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Liquid Conductivity - deviation from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.6	1.1	∞
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.3	1.5	∞
Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.3	1.0	∞
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.1	1.7	∞
Combined Standard Uncertainty			RSS				10.2	9.8	
Expanded Uncertainty (95% CONFIDENCE LEVEL)			K=2				20.4	19.7	



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Table 3a. Values for ϵ'

Uncertainty Component	Tolerance (±%)	Probability Distribution	Divisor	c_i	Standard Uncertainty (±%)	v_i or v_{eff}
Repeatability (n repeats)	0.97	N	1	1	0.97	4
Network analyzer uncertainty sources	8.38	R	1.73	1	4.83	∞
Dielectric Error Sources	5.93	R	1.73	1	3.42	∞
Combined standard uncertainty					6.08	

Table 3b. Values for σ

Uncertainty Component	Tolerance (±%)	Probability Distribution	Divisor	c_i	Standard Uncertainty (±%)	v_i or v_{eff}
Repeatability (n repeats)	1.85	N	1	1	1.85	4
Network analyzer uncertainty sources	8.38	R	1.73	1	4.83	∞
Dielectric Error Sources	5.93	R	1.73	1	3.42	∞
Combined standard uncertainty					6.20	



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Appendix 6

Photographs of the Device Under Test



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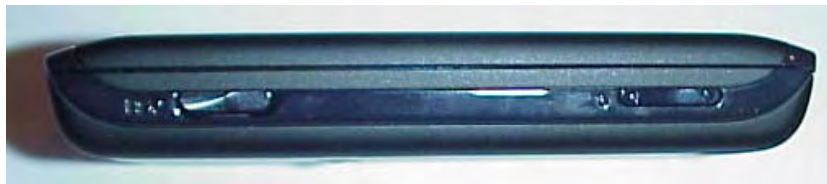
Front:



Back:



Side:





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Front:



Back:



Side:





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Position of device against head phantom using the “cheek” position



“cheek/touch” position



“tilt” position



“cheek/touch” position



“tilt” position

Position with device against flat phantom using a 15mm spacer with hands free accessory.



Front of device against flat phantom



Back of device against flat phantom.



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Handsfree Accessory: